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The OIL WEEKLY

Exclusively Devoted To The Production and Transportation of Oil and Gas

December 28, 1928 **Volume 52. No. 2**

While the original Hughes Rock Bit Cones made possible the broadening of the scope of the Rotary method of drilling ~ the development of the Hughes Self-Cleaning Cone gave to the industry a new standard of speed in making hole and footage per set of cones.

This achievement by Hughes Tool Company has effected a great economy to operators in every Rotary field in the world.

The HUGHES TOOL COMPANY

first in Service to the Petroleum Industry

JAN 28

A SUPER DERRICK

LEE C. MOORE & COMPANY, *Inc.*

PITTSBURGH · TULSA

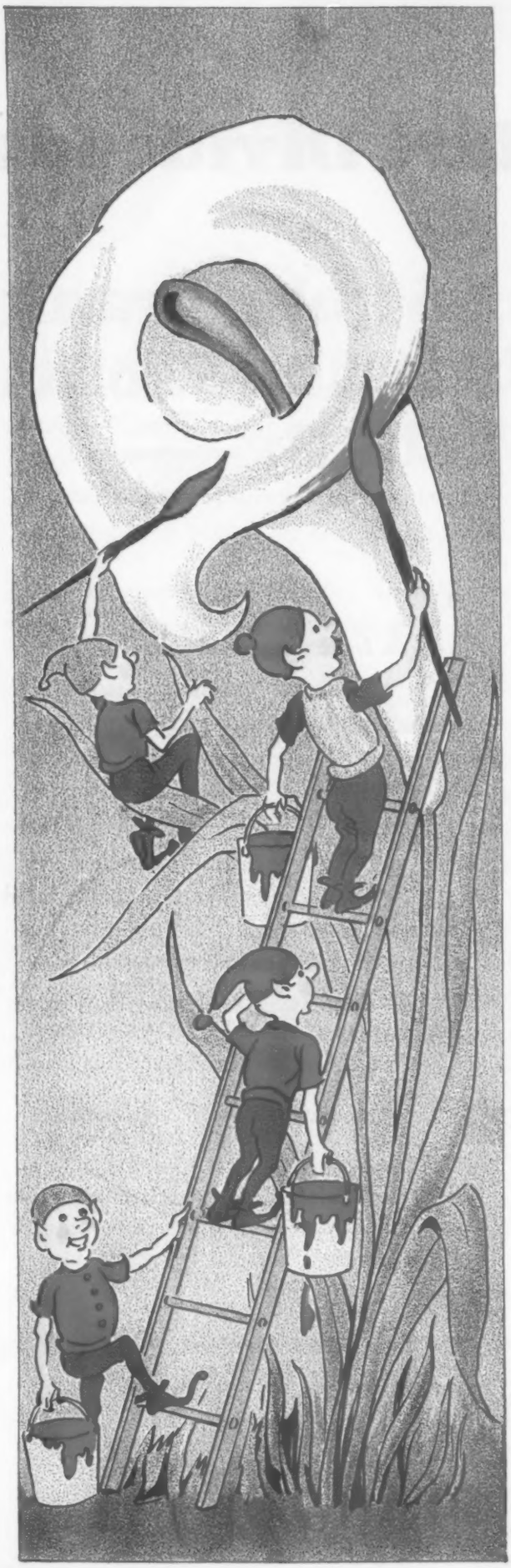
Established 1907

New York Offices: Oilfield Equipment Co., 30 Church St., New York, N. Y.

DALLAS, TEXAS HOUSTON, TEXAS WICHITA, KANSAS CASPER, WYO.
PARKERSBURG, W. VA. SHREVEPORT, LA.

Stocks in all Principal Fields

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $1.00 per year; 10 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1897.



You Can't Improve a Lily by Painting It

Nor can you, with fancy and high-sounding words, improve upon the good, old-fashioned sentiment expressed in the phrase···

A Merry Christmas Season and a Happy, Prosperous New Year

This is the wish from all of us to all of you!

Gaso Pump & Burner Mfg. Co.
Tulsa · Oklahoma

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How to Make More Dividends

The IDECO Long Stroke Crank Counterbalance Increases Profits From Pumping Wells By——

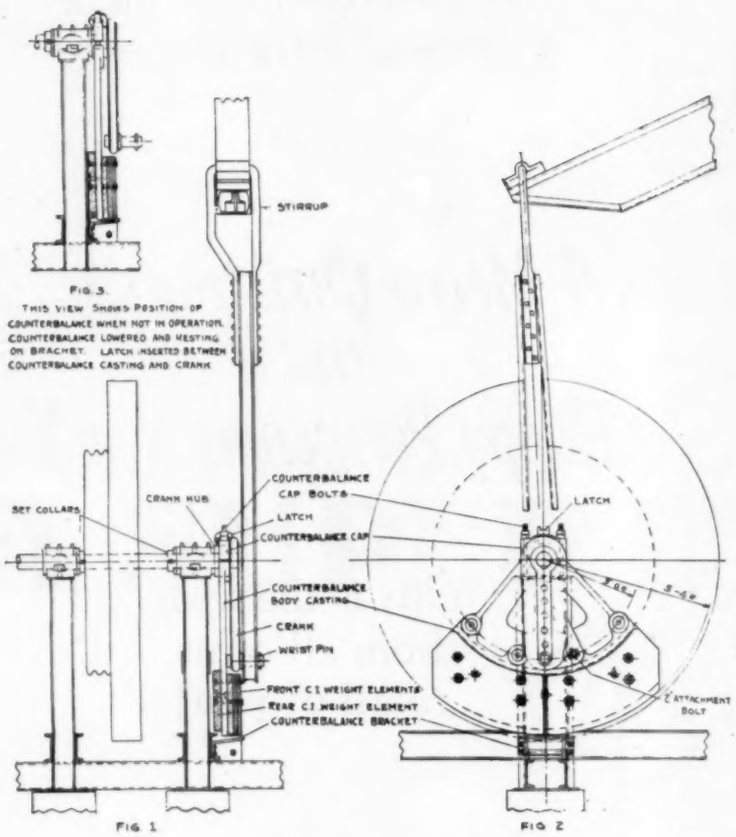


FIG. 3.
THIS VIEW SHOWS POSITION OF COUNTERBALANCE WHEN NOT IN OPERATION. COUNTERBALANCE LOWERED AND RESTING ON BRACKET. LATCH INSERTED BETWEEN COUNTERBALANCE CASTING AND CRANK

FIG. 1 FIG. 2

SKETCHES SHOWING INSTALLATION OF IDECO CRANK COUNTERBALANCE ON 850 MACHINERY SUPPORT

1 Increasing production

2 Reducing sucker rod failures

3 Reducing belt trouble

4 Saving wear and tear on band wheel and rig

5 Decreasing expensive shut down periods

6 Reducing power requirements

7 Retaining the standard rig. No changes necessary for reworking or deepening, etc.

INTERNATIONAL OIL FIELD IDECO EQUIPMENT (GALVANIZED)

From Pumping Wells

SHORT stroke pumping on deep wells necessitates high speed to secure production. This increases sucker rod failures, belt troubles, power requirements and depreciation on the entire rig. Use of the IDECO Long Stroke Crank Counterbalance, combining the pull of gravity and kynetic energy (the flywheel effect) secures smooth, vibrationless pumping. This eliminates power peaks and pauses in the load. It reduces rod trouble, belt failures and wear on the machinery. Result—continuous pumping.

This device is provided with a series of adjustments and weights to compensate for the weight of rods and fluid.

Pumping strokes from 22″ to 72″ are obtained by shifting the wrist pin. There are no moving parts to wear or bearings to oil. The counterweight is quickly and easily disengaged to permit pulling rods and tubing. Due to the smooth operation, higher speeds can be used and less power is required. The counterbalance can be installed on any standard rig.

Operators report that the IDECO Long Stroke Crank Counterbalance often pays for itself in the first few weeks of operation and permits wells being put back on the pump that hitherto have been a liability. Their use on your wells will mean increased profits and dividends.

THE INTERNATIONAL DERRICK & EQUIPMENT CO.

Detroit, Dallas, Houston, Mexia, Wichita Falls, Odessa, Pyote, Borger, Corsicana, Pampa, Panhandle, Shreveport

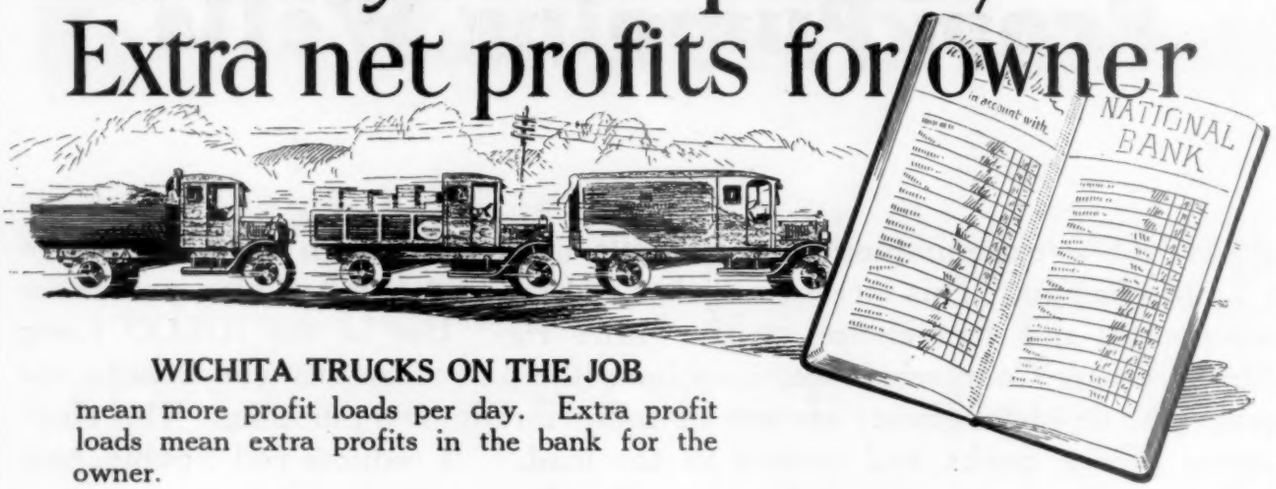
The largest company devoted to the manufacture of steel (galvanized) equipment for the oil, gas and artesian industries

Columbus, Ohio; Los Angeles, Cal.

Oil City, Smackover, Allen, Sasakwa, Eldorado, Tulsa, Tonkawa, Drumright, Okemah, Seminole, Torrance, Los Angeles, Taft

Export Representation: 74 Trinity Place, New York City. Columbus, Ohio Houston, Texas Los Angeles, Calif.

Extra Pay-loads per day
Extra net profits for owner



WICHITA TRUCKS ON THE JOB
mean more profit loads per day. Extra profit loads mean extra profits in the bank for the owner.

The Wichita "Oil Field Special" makes more extra pay loads—more extra profits per day—because it is built to give extra performance on the hard work jobs of the oil fields. Regardless of weather or roads—the Wichita delivers. It is built for 24 hours service per day where truck punishment never ceases. For an ordinary job, an ordinary truck will do, but for an oil field job the Wichita "Oil Field Special" can be depended upon to do the work cheaper, better and more dependably than any other 3-ton truck.

Oil Field Special

Send today for our new illustrated catalogue which shows you unit by unit why the "Oil Field Special" has no equal for heavy duty service.

THE
WICHITA FALLS MOTOR COMPANY

J. A. KEMP, *President* Wichita Falls, Texas

A Letter from Harry G. Nye

NYE

Thin Blade Cutter Wheels Knurled or Smooth Edge

Made to Fit
All
Standard Makes
of
Pipe Cutters

Knurled Edge

Smooth Edge

Nye cutter wheels are made from the highest grade tool steel, and are hardened and tempered in oil. Blades about 1/16th of an inch thick and straight from hub to cutting edge. Cut with one-third the time and power required by the old type wheels. And also they are—

ABSOLUTELY
GUARANTEED

To the Oil Men of the U. S. A.
Fellow Citizens:

"Take time by the forelock," says the old saying—although the old boy has hardly a hair in his head. It's a good idea, but you never can tell. There's Mother, for instance. She had Daughter vaccinated on the leg, so the scar wouldn't show. Much good that does now!

But Mother did the best she could. She had no way of knowing that this year's collar would be next year's skirt. When Daughter used to write home that she was making a good showing at college, Mother used to be pleased. Now she is worried almost to death.

Still, a man ought to make a grab at Time's forelock, even if all he gets is a handful of gray whiskers. He certainly ought not to go it blind, like a fellow driving a flivver. He ought to have his ear to the ground, or someone may put it there.

Many a man has been hit by a railroad train and thought that "I didn't see it coming" was a good excuse. And many a man has been passed by prosperity who thought "I didn't see it coming" was an alibi. There he was, right down at the union depot, with his tool-kit in his hand, and the train pulled in, and pulled out, and he didn't even get on.

No wonder Herbert Hoover is traveling to Washington by way of South America. Two days after election the fellows wanting postoffices were lined up four deep along the right of way from Palo Alto clear to Washington. No wonder Herbert went around.

I think we have four good years ahead of us, not so much because of the result of the election, but because the darned thing is over. The farmers are pretty well over their mad, and as full of hope and confidence as a bride.

So we ought to take Time by the forelock and get ready for business. Old Time ought to himself. Here he is running around with a scythe, when he could buy a harvester. He is like some fellows in the oil business are about pipe-cutting tools.

There is no better way to grab Time by the tassel than to fit your shop out with Nye Tools. They have so many exclusive features, work so much faster and easier than any others, that they save time, temper and material. And that all means profits.

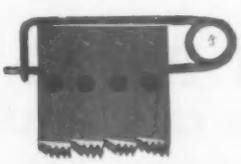
Faithfully yours,
HARRY G. NYE,
Otherwise Known As

THE NYE TOOL & MACHINE WORKS
4120-30 Fullerton Avenue
Chicago, Ill.

(Copyright, 1928, by Harry G. Nye. All rights reserved)

The rugged construction and few working parts account for the simplicity and durability of these Nye Receding models. They do the work easily and efficiently.

No. 1 Nye Receding Pipe
Threader, complete ....$9.60 net
West of Rocky Mountains $10.80



NYE (Toledo Type)
Chasers Fit Nos. 1, 1A and 2
NYE (Toledo Type) Stocks

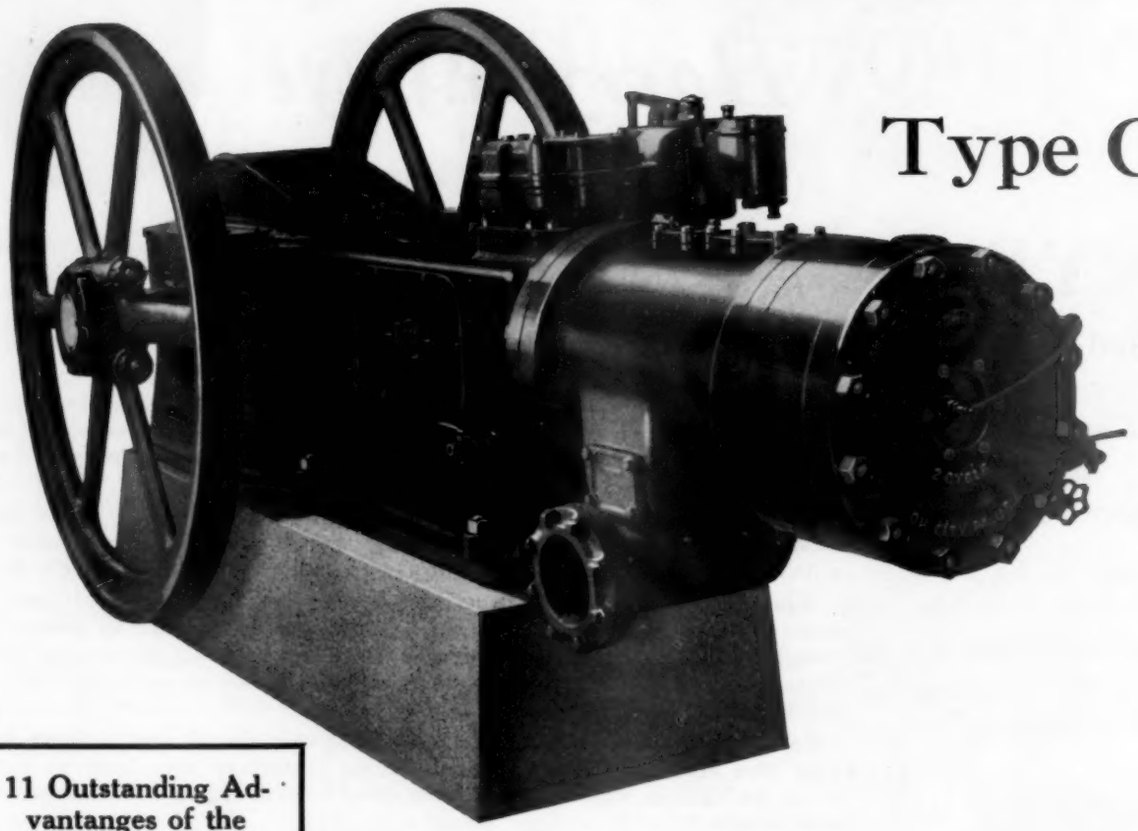
Each set is guaranteed in every particular. Will cut much easier than other similar dies.

No. 1, 1" to 1½" ..$ .75 per-set net
No. 1, 2" .....$1.25 per set net
No. 2, 2¼" to 4" ..$3.60 per set net

The No. 1A is the same as the No. 1, except that it is equipped with a ratchet for work where space is restricted.

No. 1A Nye Receding Pipe
Threader, complete ...$12.00 net
West of Rocky Mountains $13.50

REID TWO CYCLE GAS ENGINES



Type C

11 Outstanding Advantanges of the Type C Engine

1. Entirely enclosed bed plate.
2. Splash oiling system.
3. Replaceable steel-backed babbitt-lined main bearings.
4. Bored cross-head guide.
5. Reid governor, enclosed and running in oil bath.
6. Intake valve on top of cylinder.
7. Improved speed wheel arrangement.
8. Detachable cylinder head.
9. Greater power and economy.
10. Unprecedented speed range.
11. Dependable Wico ignition.

"Another Reid"

Those operators who know the qualities of the Reid Type C Enclosed Gas Engine—the speed—the power—flexibility—operating smoothness—ability to handle heavy work—have no difficulty in deciding what equipment to use in the next installation—another Reid, of course.

JOSEPH REID GAS ENGINE CO.

OIL CITY, PENNSYLVANIA, U. S. A.

BRANCHES—Marietta, Newark, and Logan, Ohio; Charleston, W. Va.; Shreveport, La.; S. R. Shoup, 724 Board of Trade Building, Los Angeles, California.

BRANCH SHOP—Tulsa, Oklahoma.

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The Tools that work with your crews

It's a good idea to standardize on Wilson Tongs and Elevators. All of these tools embody the spring-latch feature. They are more convenient to handle, require fewest movements on the part of the Crew and speed up operations.

Ask for Literature.

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OIL TOOLS DIVISION

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Speed
Strength
Convenience

REFINERY VALVES DRILLING VALVES

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FLOW LINE VALVES HEAVY DUTY FITTINGS

A MASTERPIECE Among Drilling VALVES

1. Forged Alloy Steel Stem Extra Large Diameter.
2. Alloy Steel Studs With Milled Hexagon Nuts on Each End.
3. Hook Hole for Easy Installation, Perfect Balance.
4. Reinforcing Rib.
5. Minimum Chamber Prevents Sand Accumulation or Cable Looping.
6. Long Packing Chamber.
7. Bronze Bearings.
8. Tongue and Groove Joints.
9. Minimum Area Exposed to Pressure. No pockets to Accumulate Sand or Cement.
10. Double Acme Threads.
11. Bronze Bushing—Extra Long Bearing Threaded Full Length and Securely Pinned.
12. Receding Integral Seats.
13. Extra Long Perfect Threads.
14. Full Clearance for Lightest Weight Casing.
15. Wedge Gate—Positive Acting.

In addition to these mechanical advantages every Kerotest Drilling Valve is given the famous Kerosene Test and certified by the Pittsburgh Testing Laboratory.

Could you ask for more in a Drilling Valve?

KEROTEST MANUFACTURING COMPANY

PITTSBURGH **PENNA.**

Manufacturers of Drilling Valves, Refinery Valves, Flow Line Valves and Heavy Duty Fittings for oil field service.

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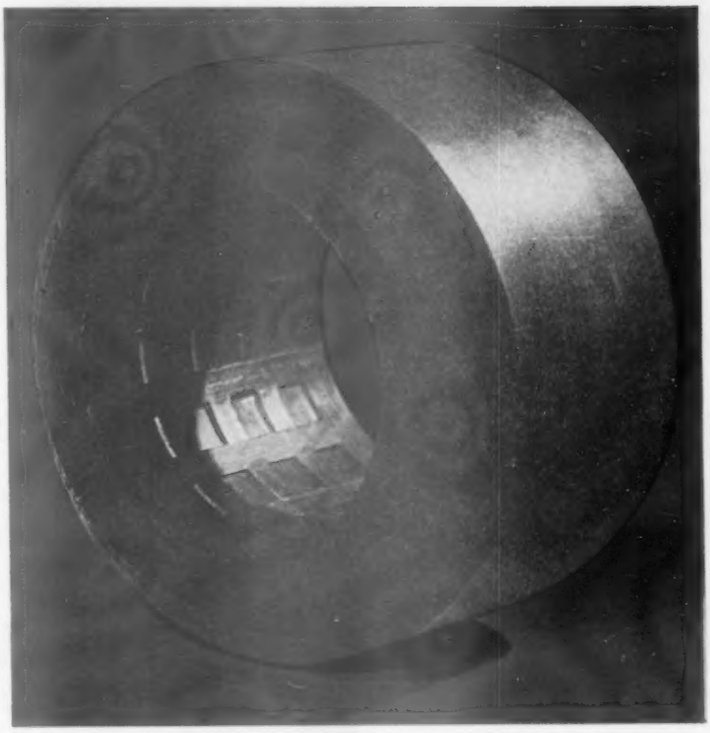
Say you saw it in The OIL WEEKLY

These reports by 21 Drillers are proof of big savings



"Best bet yet!"

The seamless Protector. No metal pins, no clamps, no hinges; nothing to work loose or rip out. The original and genuine protecting rubbers. Unnecessary to resort to intricate holding devices. No metal added to hole to cause fishing jobs. Fully covered by Patents. More than 82,560 in service.

"Our hole was so crooked that when the clutch was thrown out the pipe would make five or six revolutions backwards, showing the crooked screw effect on the drill pipe. After installing, the pipe rotated freely."

* * *

"After running 4 months on a well that had reached 5,300 feet on our Brea (Calif.) lease, the wear was not even enough to measure."

* * *

"At least 5 days' production have been saved on each well that we have drilled recently due to faster and easier drilling, by the aid of Bettis Protectors. We estimate that approximately 15,000 barrels per well in extra production has been obtained as we were drilling in off-set."

* * *

"Following the installation of these Protectors we made two round trips, thinking that a twist-off had occurred because the pipe rotated so easily. We have run these Protectors in formation a great deal and they do not show any abrasion."

* * *

"Before installing Protectors we were changing our brake bands every week. Since installation we have not changed a single one. The reason is that the Protectors form a float for the drill pipe, preventing pipe from dropping too fast and the strain is taken off of the brake bands."

* * *

"We drilled 60 feet of 6¼-inch casing up most of the time with fish-tail bits. About 45 days were required to drill up same. There were pieces of steel as large as a dollar passing the Protectors at all times. These Protectors do not show any wear and we feel this is a most severe test."

* * *

"On test with a machine for surveying wells we find that the wells were actually straighter than those drilled without Bettis Protectors. This is either because the Protectors act as guides or because drilling is easier."

* * *

"Collapse of stove-pipe casing was entirely eliminated by our use of Bettis Protectors. We found that the stove-pipe casing did not break loose from its seat and follow down the hole as was the case before using Protectors when drilling in large holes. Consequently many days were saved going after a new seat and recementing."

* * *

"We think the Protectors are the best thing that the Oil Industry has had since quitting drilling with a spring pole . . ."

"Our experience has been that the twist-off record over a 6 months' period, with 15 rigs drilling, was cut more than half as compared with a 6 months' period prior to installation of Bettis Protectors."

* * *

"Your Protectors are one of the most economical things that have ever been put in a well."

* * *

"Your Protectors have been especially valuable as we operate a wildcat hundreds of miles from the nearest supply house and our saving of time and expenses has been remarkable. Our saving is so great that we would use them even if they wore out every five hours."

* * *

"On one lease where we have from 13 to 16 rigs drilling constantly and have for the past 8 years, our cost of operation has been cut down at a rate of from $150,000 to $200,000 per year and this does not take into consideration the loss of oil and wells that might have occurred due to collapsed casing had we not used Bettis Protectors."

* * *

"Observation of one of our wells under test shows steam savings running as high as 35 per cent. This is a big saving in fuel and amount of water to be pumped. In another well, by using Bettis Protectors, it was found unnecessary to install an additional boiler that was ordered before the Protectors were in use."

"On a deep test in Ventura before installing Bettis Protectors, it took one turn of the throttle to rotate the pipe when off bottom. After installing, the pipe rotated freely with the throttle barely cracked, saving about 50 per cent fuel."

* * *

"In one well the saving in collars alone was enough to pay for the Bettis Protectors. Before installing the Protectors we were cutting off and replacing collars every 3 to 5 days. After putting on the Protectors we never changed a collar and finished the well with some 90 days' drilling.'

* * *

"In salvaging a 5,000-foot well we were able to pull all of the casing and use it again. It showed no wear on the inside. From 3 other wells in the same location, but not Bettis-equipped, we were unable to save but a small portion of the casing and it was so badly worn that we didn't dare to use it."

Ask for New Catalog

Patterson-Ballagh Corporation

Insurance Exchange Bldg., Los Angeles, Calif.

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Bettis Sales Co., 817 Public Nat. Bank Bldg., Houston, Texas

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Carried in stock at: Los Angeles, Santa Fe Springs, Ventura, Long Beach, Tulsa, Houston, New York City.

Bettis Protectors

1929

. . . A New Year, with
. . New Hopes
. . New Ambitions
. . New Aspirations
. . New visions of
. . Prosperity and Progress

ABERCROMBIE

RED BALL SERVICE

LONG DISTANCE 200
FAIRFAX 5317

Take advantage of our new fast service. Twelve Operators:— Practical drillers with years of cutting experience, are at your command, with the following size tools: 3-inch, 3½-inch, 4-inch, 4½-inch, 5-3/16-inch, 6-inch, 6⅝-inch, 7-inch, 8¼-inch, 9-inch and 10-inch. Your phone call, wire or letter will start a man to you at once.

. . . . and the J. S. Abercrombie Company sincerely hopes that the coming year will witness the accomplishment of all these worthy desires.

. . . . and the J. S. Abercrombie Company further hopes that the "Abercrombie Inside Cutting Tool", on its meritorious record of successful cuts, will be given many opportunities to serve you during 1929.

J. S. ABERCROMBIE CO.
616-18 West Bldg., Houston, Texas, U.S.A.

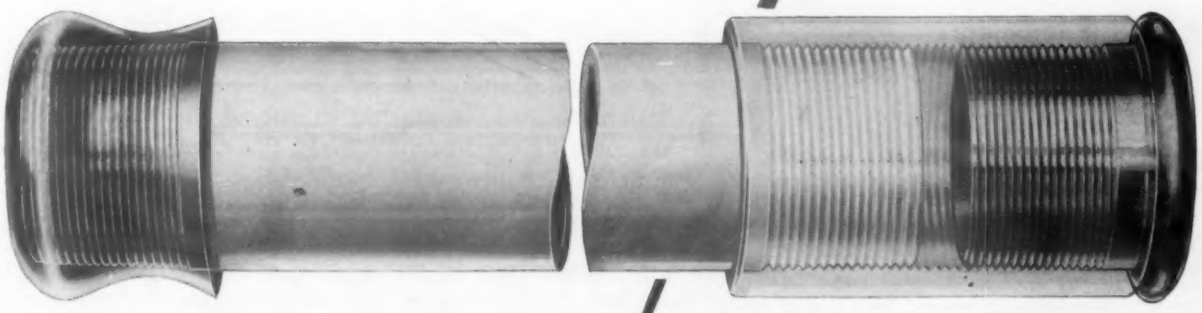
Say you saw it in The OIL WEEKLY

You are Entitled to this Protection

THE Colona Thread Protector protects and keeps clean the threads on pipe and couplings—their use assures you of undamaged ends—of perfect, clean threads and of a positive, correctly seated joint.

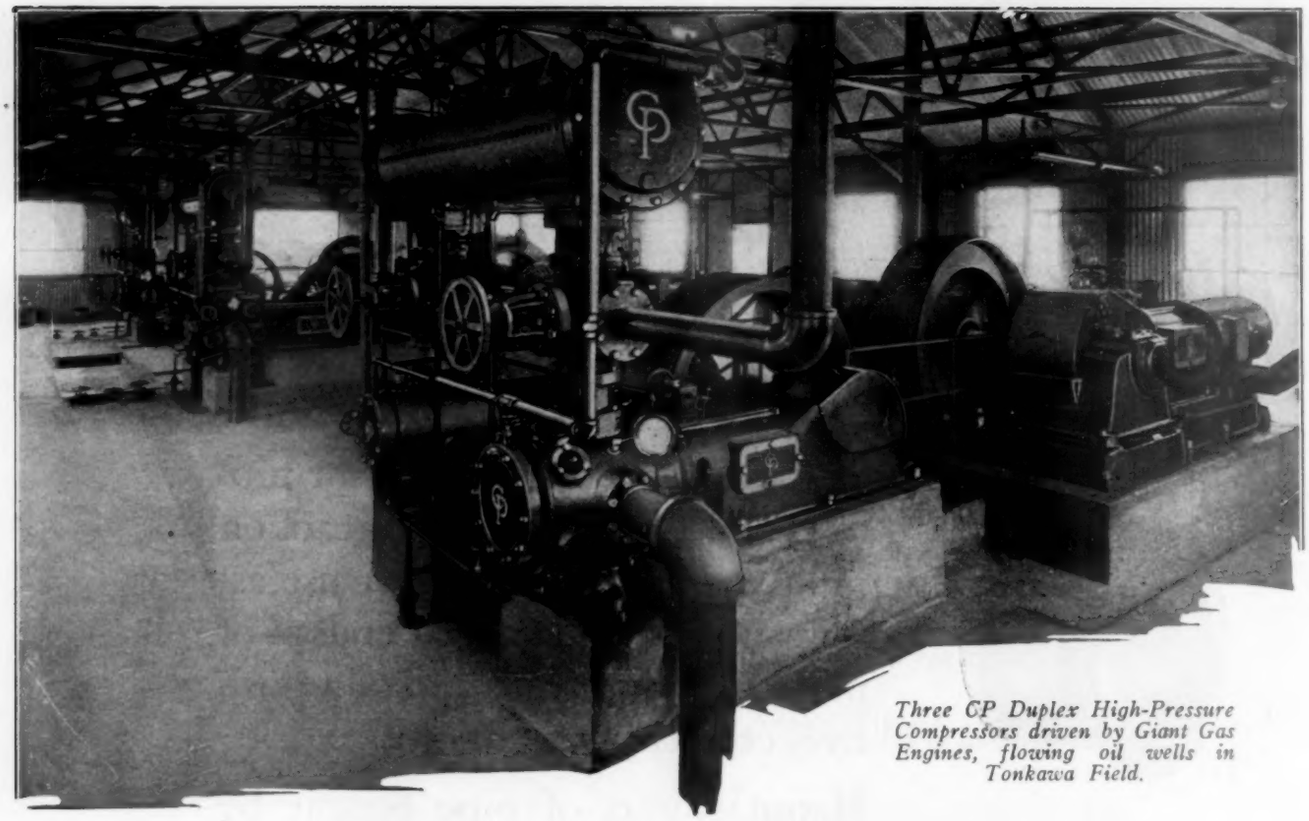
Manufacturers of pipe benefit by delivering the pipe to you in perfect condition.—You benefit by eliminating delays, rethreading and lost pipe shop labor.

Ask for Colona Thread Protectors on your next order—they protect the couplings as well as the pipe.



Colona Manufacturing Company

Pittsburgh, Penna.



Three CP Duplex High-Pressure Compressors driven by Giant Gas Engines, flowing oil wells in Tonkawa Field.

CP Compressors, Oil and Gas Engines For Oil Field Service

CP

Oil-Field Equipment:

Compressors for flowing of wells,
Vacuum Pumps, Condensers and Compressors for refinery service.
Gas Compressors for pressure boosting.
Diesel Engines, 80 to 450 h. p.
Gas Engines, 90 to 270 h. p.
Portable Oil and Gasoline Engine-powered Air Compressors for cleaning wells and tank farm work.
Pneumatic Riveters, Chippers, Caulkers, Scalers, Drills, Reamers and Grinders to handle every portable tool job.

YOU can secure a CP Compressor to meet any oil-field requirement. There are more than 500 types and sizes, all thoroughly proven, for operation by oil and gas engines, belt or electric motor, in stationary, portable or semi-portable units.

Out of the fog of claims and counter-claims, the fact is, that in a list of installations recently appearing in one of the leading Oil Trade Journals covering the Seminole Field, there were practically as many CP units as all other makes combined.

If you have wells to flow, tanks to erect, pipe lines to lay, refineries or extraction plants to equip, let our oil-field engineers confer with you—they have had a wide experience in all branches of the industry.

J-284

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Chicago Pneumatic Tool Co.

6 East 44th Street, NEW YORK, N. Y.

Sales and Service Branches all over the World

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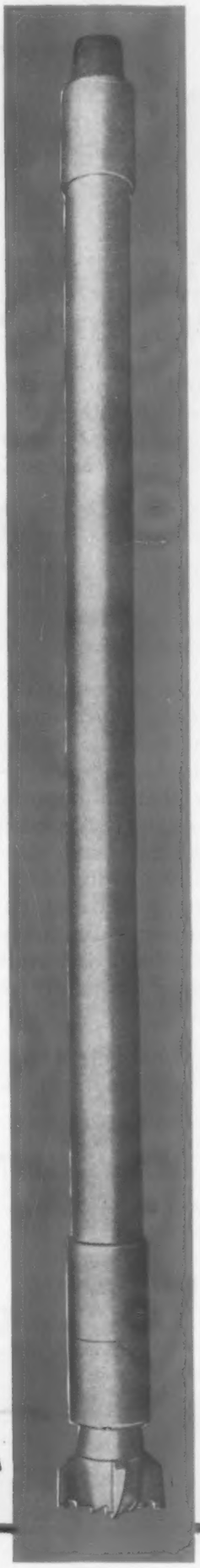
Results -the final test

RESULTS obtained — adequate; informative cores, easily and economically obtained—are the reason for the tremendous popularity of the H. C. Smith Type "C" Coring outfit among shrewd operators and exacting drillers.

The many performance records of this dependable coring outfit will convince you of its worth.

Guaranteed to Take Perfect Cores in Any Formation That a Fish Tail or Disc Bit Will Penetrate.



The H. C. Smith Type "C" Coring Outfit includes: Outer Barrel (with top and bottom subs); Inner Barrel Assembly (3 ft. retainer sections, retainer collars, and retainer valve), Bit Body, and Bit Cutterhead, Core Catcher, Core Pusher, and Bit Breaker.

H. C. SMITH
MANUFACTURING CO., INC.

Los Nietos, California

Branch Offices and Warehouses:
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Oil Well Supply Co.,
Exclusive Distributors for Smith Coring Equipment All Over The World (Except in California)

Cable Address: "Smithco, Whittier"

H.C.Smith TYPE "C" CORING OUTFIT

What Happens ?

—When Your Machinery Starts and Stops

Much of the wear and tear on machinery comes from starting and stopping. For then the fluid film of lubrication is broken, ***and unless you are using the right lubricant,*** friction takes a heavy toll.

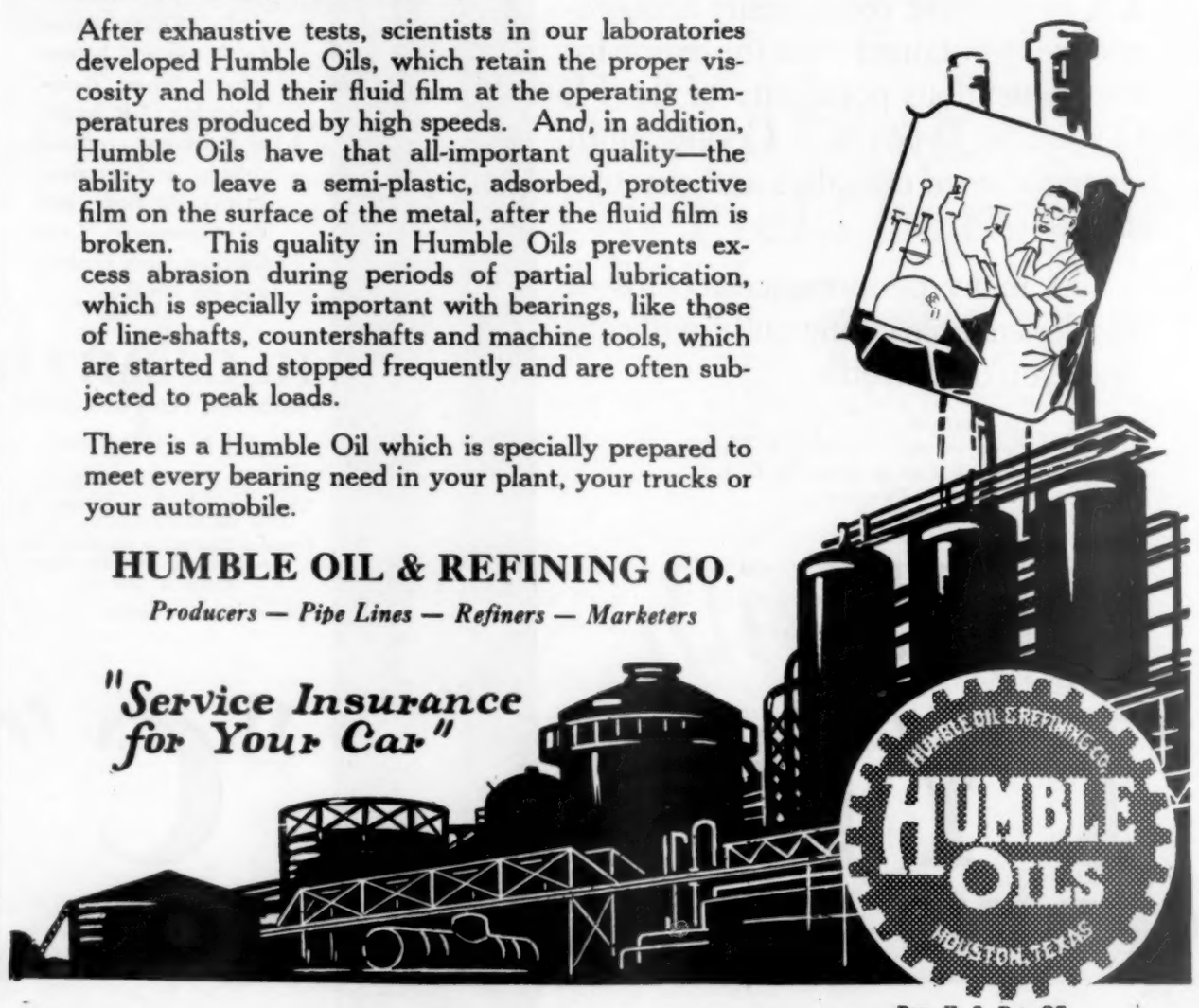
As long as the fluid film is intact, the quality of the lubricant is not so important—but when the fluid film breaks, as it does every time you start and stop a machine—the quality of the lubricant supplied to the bearings is of prime importance, if friction is to be kept from doing serious damage.

After exhaustive tests, scientists in our laboratories developed Humble Oils, which retain the proper viscosity and hold their fluid film at the operating temperatures produced by high speeds. And, in addition, Humble Oils have that all-important quality—the ability to leave a semi-plastic, adsorbed, protective film on the surface of the metal, after the fluid film is broken. This quality in Humble Oils prevents excess abrasion during periods of partial lubrication, which is specially important with bearings, like those of line-shafts, countershafts and machine tools, which are started and stopped frequently and are often subjected to peak loads.

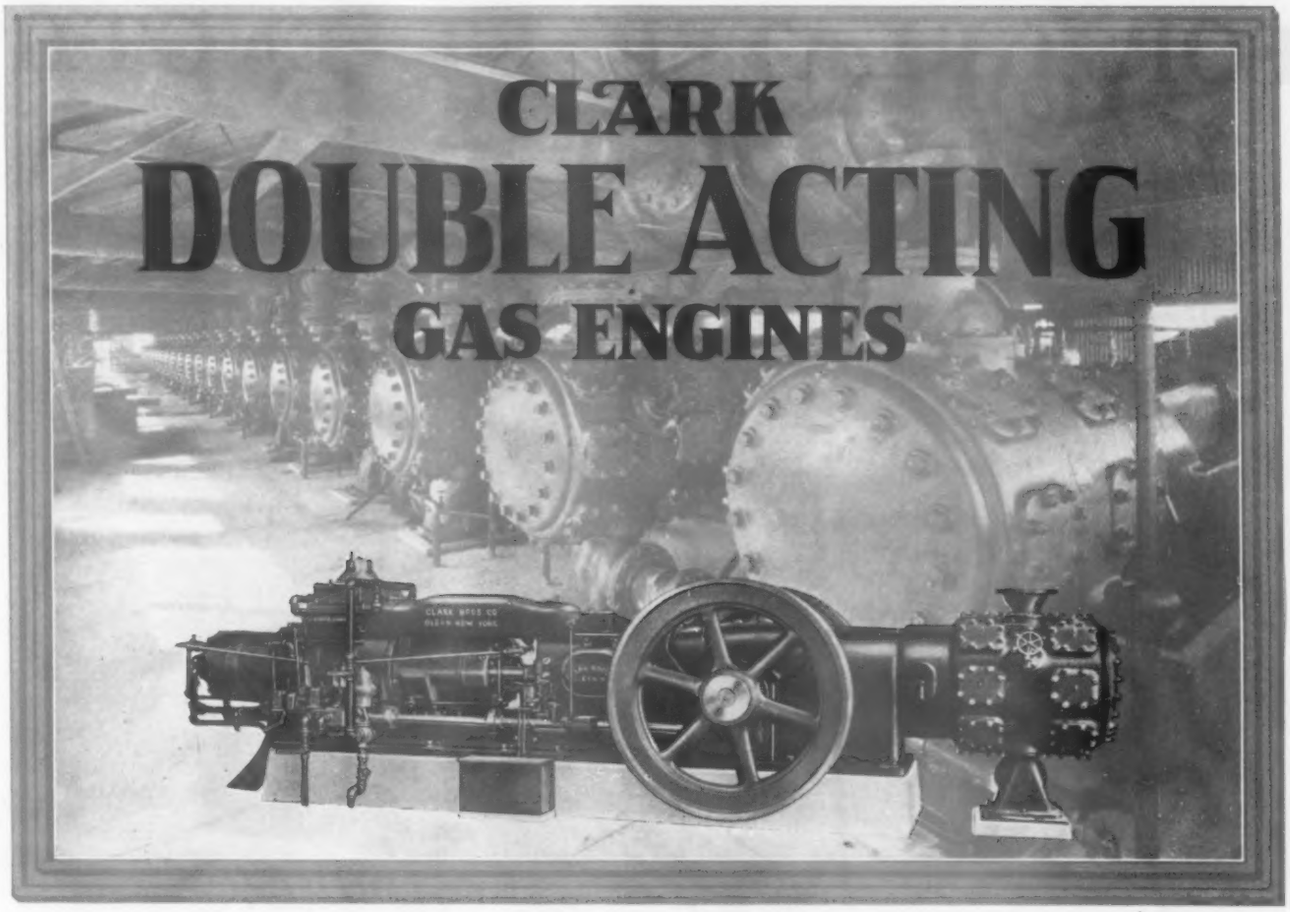
There is a Humble Oil which is specially prepared to meet every bearing need in your plant, your trucks or your automobile.

HUMBLE OIL & REFINING CO.

Producers — Pipe Lines — Refiners — Marketers



Reg. U. S. Pat. Off.



Cost Less Per H.P. to Buy, Install and Operate

The CLARK DOUBLE ACTING Engine secures a driving impulse in both directions of crosshead travel for every revolution—thus delivering twice as much power as an ordinary engine, in practically the same floor space, and without becoming excessively heavy. It utilizes the famous CLARK "Super 2" Cycle principle which enables it to operate on 1/3 less fuel than an ordinary 2-cycle machine, and renders it fully as efficient as the best 4-cycle engines when at their best in test condition.

Thus it is obvious that buyers of the CLARK Double Acting Engine save real money in three ways. (1) Engines furnishing the required horsepower cost less to buy. (2) The required horsepower is installed at greatly reduced cost for foundations, freight and hauling, buildings, and piping for both power and compressor ends. (3) The combination of 2-cycle simplicity with an efficiency at least equal to the best 4-cycle machine insures the very minimum operating cost.

The CLARK Double Acting Engine is made in 200 H.P. Single and 400 H.P. Twin Types. The revolutionary economy effected by this engine merits investigation by every operator requiring heavy compressors. Get complete data from our engineers.

Clark Bros. Company, Olean, N. Y. Branches and warehouses at 125 W. First St., Tulsa; McCamey and Sweetwater, Texas; and Artesia, N. M. Smith, Booth, Usher Company, 228 S. Central Ave., Los Angeles, and 50 Fremont St., San Francisco.

Clark Bros. Co. Olean, N.Y.

CLARK

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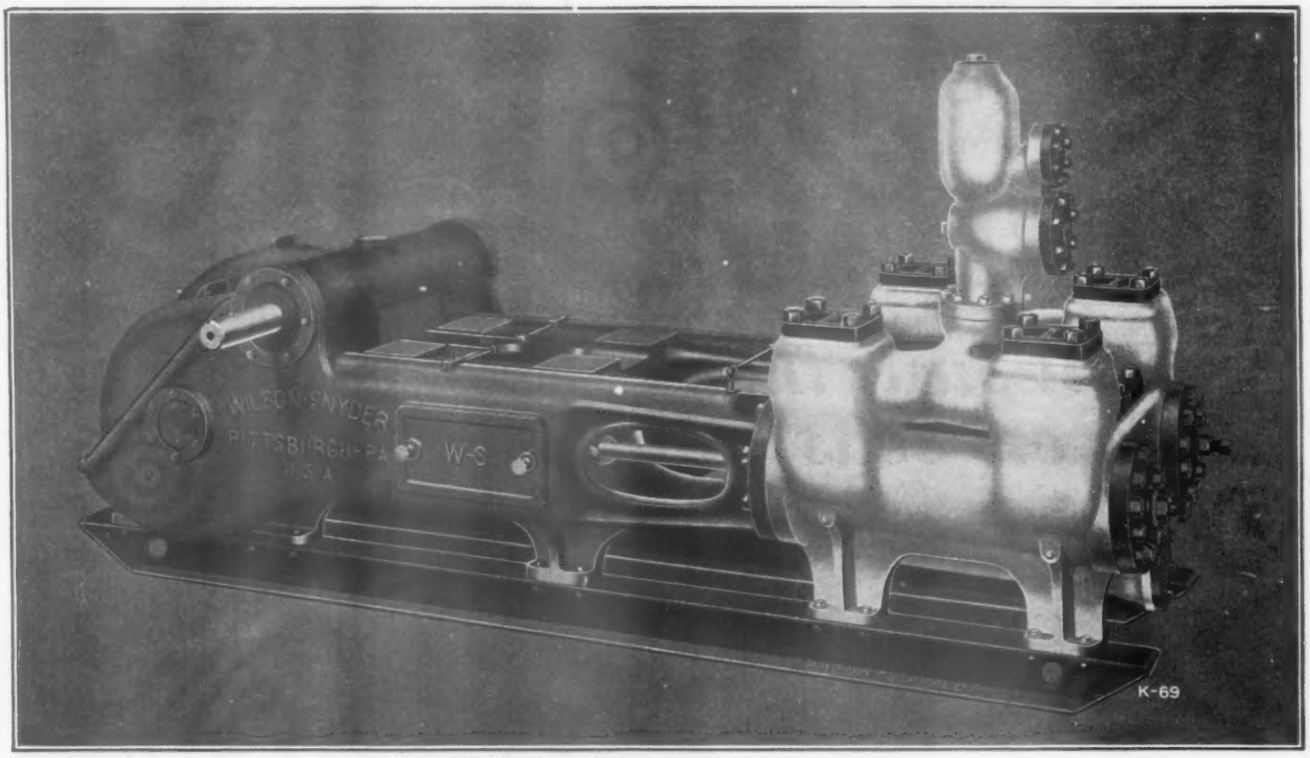

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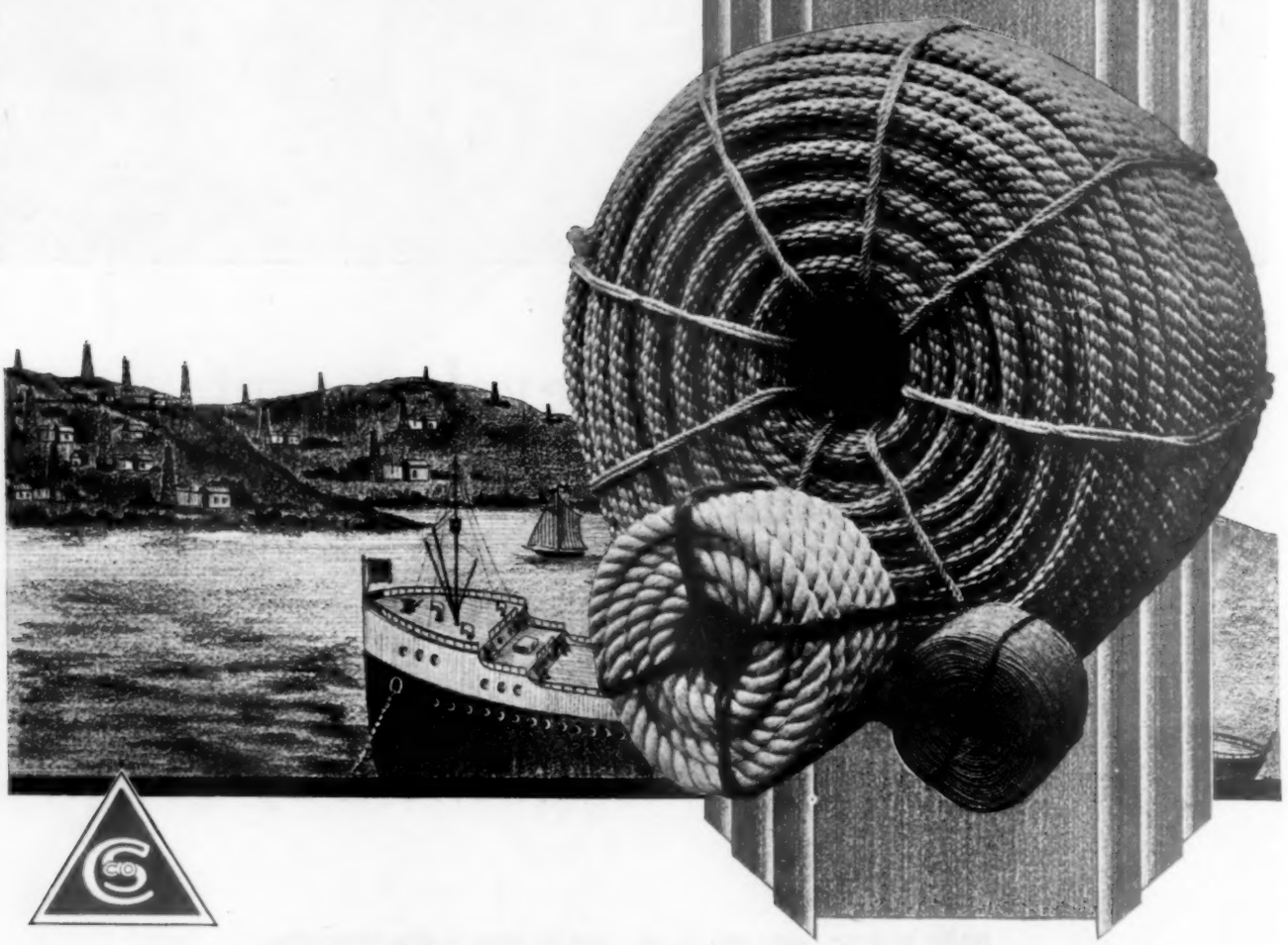

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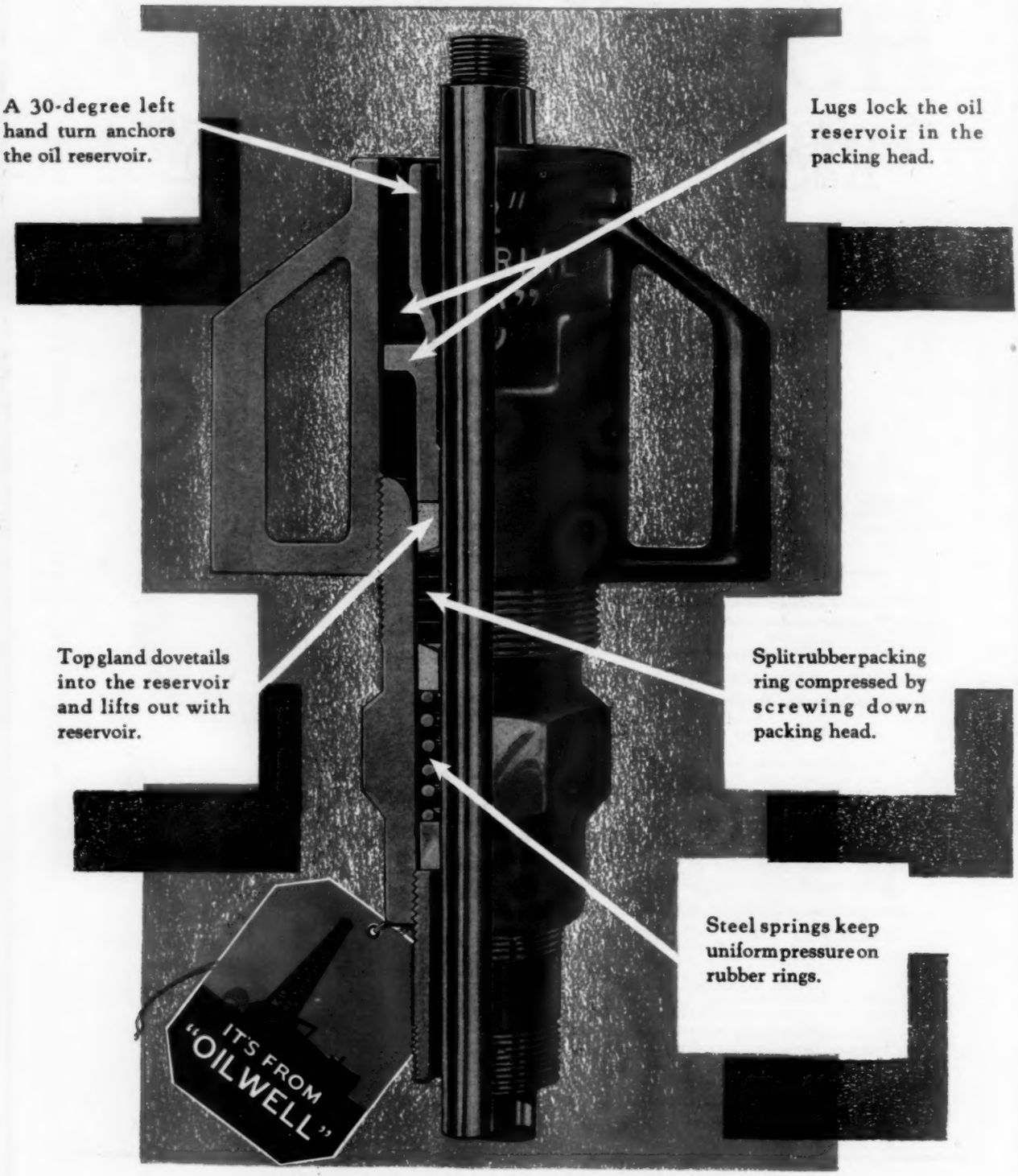
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Say you saw it in The OIL WEEKLY

California and Texas Production Getting Out of Bounds

Over optimism in California and breaking of proration restrictions by West Texas operators adds further complications

By H. J. STRUTH
Petroleum Economist

WHATEVER encouraging news arises in various sections of the country in the way of production declines, is soon vanquished with further discouragement from California and West Texas. Although complete A. P. I. production data was not available for California at the time of going to press, advices from our staff representative in that state indicate a gain of at least 11,200 barrels in the daily average production there last week. In all probability, there was a larger gain, but this represents a conservative estimate. Conditions in California seem to be getting worse, and it begins to look as if the "lid is off" the way operators are going after new production. Judging from the amount of new drilling at Santa Fe Springs, it becomes apparent that it will take some drastic declines in other fields to offset the rising tide of production in that area. Unless some radical steps are taken by California operators at the earliest possible moment, it is a foregone conclusion that there will be a serious break in the crude market. In other words, unless these operators "take the bull by the horns" and set about to correct their unstable position, the economic law of supply and demand will exact a penalty in the form of a price cut, which will be effective if everything else fails to stem this oil flood.

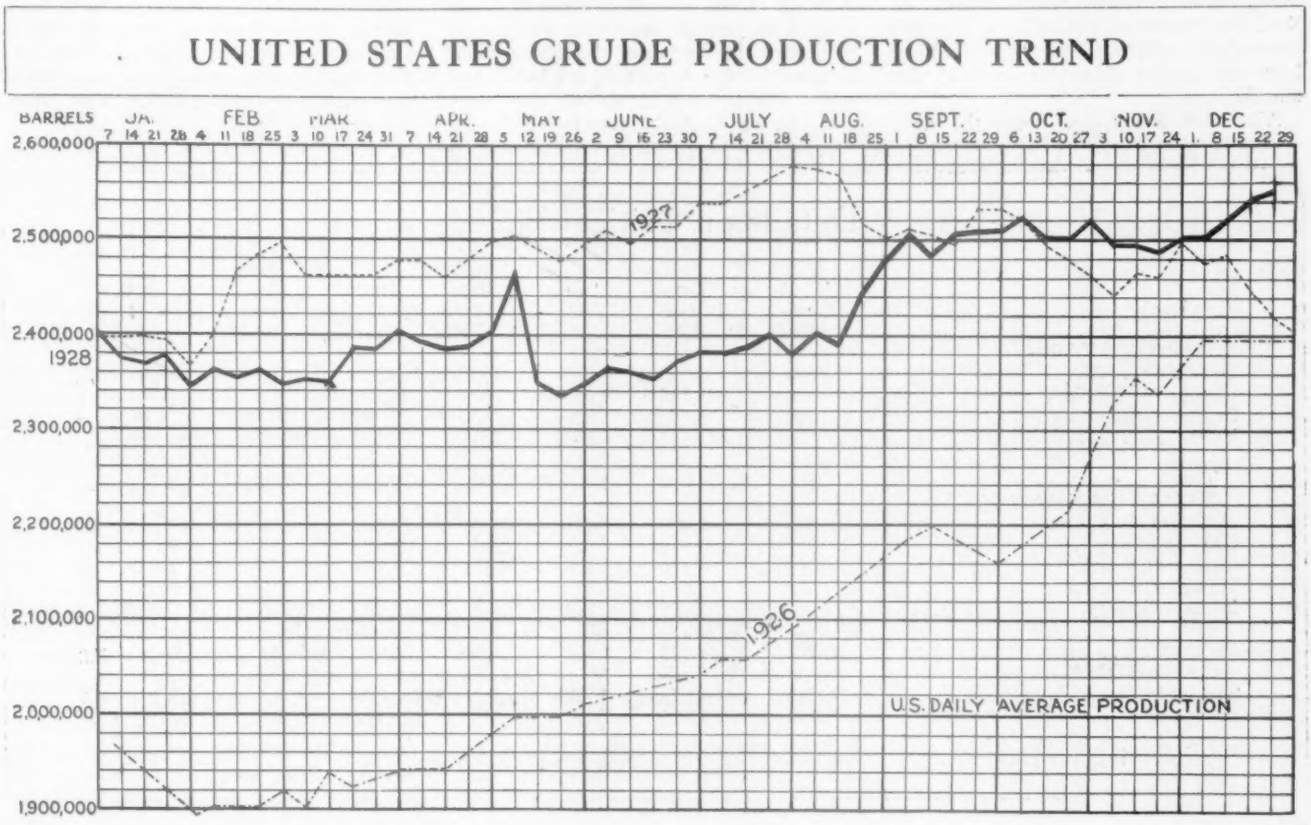
Any downward revision in the California crude market is bound to have a depressing influence upon the general oil market, and it is therefore imperative that operators there take constructive steps to prevent such demoralization.

Texas Gains

According to A. P. I. production figures for Texas, it is noted that West and Southwest Texas continue to show gains in their daily output. Last week, West Texas registered a gain of 6400 barrels. While Southwest Texas' gain was 1050 barrels. There is a lot of speculation in West Texas over the possibility of increasing the output of several of the fields which are now under proration restrictions. According to late advices from West Texas, there is danger of serious disagreement among quite a number of operators concerning the powers of the respective proration committees. The details concerning this are given in this section in connection with West Texas market news. It is to be deplored that better coordination is not possible among the producers. Apparently, many of them feel that they are entitled to produce all the oil they desire, regardless of whether it is allowable under proration schedules. The danger of this situation is that, before long, this idea will spread to other sections and, before we realize it, conditions will have reached the stage where the only remedy for overproduction will be a drastic downward revision in the crude market. That is the main difficulty now confronting the industry; to convince everyone concerned that proration is a means to an end, and that end is better market conditions. As long as groups of operators here and there continue to fight proration committees, just that long will the entire industry suffer under present depressed market conditions. If proration was adopted in all of the prolific oil producing areas of the country, and the schedules strictly adhered to for 30 days, the entire industry would benefit by the improved situation that would result.

Mid-Continent

The Mid-Continent light oil market is



merely marking time right now as it awaits the outcome of several important pending developments, none of which will occur until after the first of the year. Foremost among these will be completion of wells at Mission the middle of February.

Allen pool is another area, and one which is highly rated. The lone Wilcox sand producer will probably be opened up after the first of the year and deepened to test its full producing capacity. This well is good for 35 barrels per hour at only two feet in the Wilcox. Indications are very favorable for a large extension to the southwest as T. B. Slick's test in Section 24-5n-7e, is running high. Operators are watching the situation closely here and are ready to proceed with a large drilling campaign at once if the discovery well should be opened. It is expected that some regulated drilling program will be adopted before exploration is thrown open.

West Texas

The West Texas district is scheduled to register a gain of 25,000 barrels daily immediately after the first of January as result of Winkler County operators gaining the approval of the Texas Railroad Commission after a special hearing to restore allowable production in Winkler County fields to 175,000 barrels daily at the end of the present month. Coincident with this increased allowance facilities will be made available by the Atlantic Pipe Line Company to handle about 40,000 barrels daily direct to tanker terminals at Atreco. Atlantic Pipe Line Company's 10-inch trunk line began taking oil December 19, and the operation of pump stations will start late this month. This line is largely dependent upon Winkler County crude for a supply, and Atlantic is inviting outside crude for purchase, although Atlantic Oil Producing Company's controlled production and storage oil can keep the carrier filled to capacity for months.

Allowable production from the deep lime horizons in the Howard-Glasscock County district was increased to 35,000 barrels daily, representing a gain of 5000 barrels daily over previous allowance by the commission, according to Umpire E. E. Andrews. This deep pay area produced 773,537 barrels during the monthly period of proration ending December 16, or at average rate of 25,784 barrels daily.

Application for a larger proration quota for the Yates field operators, who are being forced to restrict the flow of their wells to a greater extent than any other West Texas field, has been made to the commission, and some relief may be given by January 1. Yates field is limited to 72,500 barrels daily.

The first legal action taken against proration enforcement in West Texas was resorted to December 19 when a group of Winkler County operators obtained a temporary injunction in an Austin district court against the commission, and upon the granting of same their nine wells were opened to a combined flow of 5400 barrels daily. Another hearing will be held in Austin shortly to determine if the injunction shall be made permanent, and the future of harmonious proration enforcement in West Texas probably hinges on the outcome of this case. The crude price structure would be seriously weakened if many operators in the prorated fields break ranks on carrying out the general terms of the proration rules now in effect, and heretofore threats of a crude price cut have been held over the heads of operators seeking to overthrow production restrictions.

California

Continued increase in California production is being caused chiefly by the rapid rise of the Santa Fe Springs field and no relief is in sight for several months. Long Beach is showing only a small decline, giving Santa Fe Springs a chance to increase the State total almost the full extent of its individual gain. The settled fields of the State can not be depended on to offset the gain by the critical areas. Ventura and Elwood probably will not show a decline, and may show increases from month to month.

New production during the week in the Santa Fe Springs field totaled 30,000 barrels from 10 wells. The natural decline from the older wells was about 10,000 barrels, giving the field a net increase of about 20,000 barrels. Peak production will be reached quickly and the decline will be rapid, unless the intermediate zone comes to the rescue of the Buckbee sand. The crude market has not been seriously affected by the increased production, but it undoubtedly will feel the strain before development is over. The operators do not seem worried concerning the possibility of a break in the crude market, the chief aim being to get the oil as soon as possible. Progress along lines of conservation has been very limited for several weeks, the chief efforts now being confined to re-pressuring the upper zones instead of an actual cutting back of wells. There is no shortage of storage because of the rapidly increased production.

One of the chief dangers in California is over-confidence. The average operator evades the question of over-production and leaves the impression that there is not a danger of a flood of oil. A careful analysis of the situation shows there is danger of over-production, just as there was cause for worry in past years. The fact that Santa Fe Springs produces light oil has been used as an argument that the skies never seemed bluer. If California is not careful, she will be faced with another serious wave of over-production. A turn for the worse in the Mid-Continent would immediately affect California—much more so than in the past. California is not the independent unit she was several years ago. Her crude is already mingling with that from many other fields.

Details on Critical Fields

Pool—	Oil Wells Completed	Total Initial Production	Initial Per Well	Number Producing Wells	Daily Production Barrels	Daily Prod. Per Well	Rigs Up	Wells Drilling
WEST TEXAS—								
Hendrick	460	2,537,160	5,516	469	146.320	*312	4	78
Church & Fields	188	203.245	1,081	187	28,250	151	..	1
Gulf-McElroy	68	55,740	820	68	13,190	194	..	3
Yates	281	1,825,545	6,497	281	72,110	*257	4	12
Total	997	4,621,690	4,636	1,005	259,870	259	8	94
TEXAS PANHANDLE—								
Hutchinson County	1,132	548,900	485	1,006	29,080	29	10	22
Gray County	305	126,510	415	295	22,815	77	9	45
Carson County	181	59,370	328	157	5,765	37	2	12
Wheeler County	44	14,645	333	35	725	21	6	12
Moore County	5	3,650	730	3	2,985	995	3	9
Total	1,667	753,075	452	1,496	61,370	41	30	100
OKLAHOMA—								
Seminole	1,606	2,097,578	1,306	1,299	**276,209	212	29	207
St. Louis	298	328,717	1,099	281	129,927	462	12	71

*Production partially pinched. **Mission and Maud districts partially pinched.

Power of Texas Commission to Prorate Gets Court Test

Murchison and Cranfill Brothers get temporary injunction in Austin Court; final hearing scheduled to be held early in January

DALLAS, Texas.—Legal rights of the Texas Railroad Commission to enforce its proration rules in Winkler County are to be tested early in January as result of partnership operators on two separate properties in the Hendrick field obtaining temporary injunctions December 19, after a brief hearing in District Court at Austin. Murchison Oil Company and Cranfill Brothers Oil Company, Dallas, were successful in making their application to flow their eight wells at the rate of 4000 barrels daily, while the second injunction was granted to the Murchison Oil Company, T. P. Lee and associates to flow a single well on 20-acre lease at a maximum rate of 1400 barrels daily. The other well on the latter lease is dead.

The temporary injunction granted at Austin last week is the first legal steps taken by West Texas operators to restrain the commission from enforcing its proration rules, which have been in effect in Winkler County since May 5, 1928, and the final outcome of the court action is of vital importance to the crude market situation in West Texas as well as other areas. Proration as now enforced in Winkler County and other West Texas flush oil producing areas is heartily approved by the majority of the operators involved, and the latter group have signified their intentions of supporting the state in the forthcoming hearing at Austin to determine if a permanent injunction is to be granted the above plaintiffs.

The American Petroleum Company, which has had two contracts involving total deliveries of 1,250,000 barrels of Winkler County crude from properties of the Murchison Oil Company and Cranfill Brothers Oil Company, was made a party to the injunction along with the commission in order that acceptance of crude from the properties above the proration allowance could not be blocked. About 180,000 barrels of crude remains to be delivered on the last contract made with American Petroleum Company, and the price being paid for this oil is reported to by 40 cents per barrel, with other considerations involving the advancement of funds to drill wells. American Petroleum Company is also taking Murchison Oil Company's half interest in the oil produced from the Murchison-Lee et al well, while Humble Pipe Line Company ran the remainder for purchase at 65 cents per barrel, or the field posted price. Humble Oil & Refining Company was overlooked in the temporary injunction action, and will probably refrain from taking more oil from T. P. Lee's share of the production than allowed under proration rules. The commission notified each pipe line owner in the Winkler County area early in December that they would be liable to penalties if more oil was run from a single 40-acre unit than permitted under proration rules.

The plea for relief from proration enforcement by the Hendrick field operators was largely based on the claim that their allowable production was not sufficient to keep the water from lowering the rock pressure so that the wells maintain natural flow, while the Murchison Oil Company and Cranfill Brothers Oil Company are seeking to fulfill their crude contract, which calls for a maximum delivery of 4000 barrels daily to American Petroleum Company. In the event the plaintiff's wells hold up to the flow allowed under the temporary injunction for 45 days the low priced crude contract would be disposed of, and then the regular field posted price of 65 cents per barrel would be available for the same oil, as no new contracts have been made in recent months below the posted price.

The court action at Austin was preceded on the day before by a hearing before members of the commission regarding the granting of permission to open the two properties to a combined maximum flow of 5400 barrels daily until contracts could be filled. The plea was turned down, according to Clint W. Murchison, president of the Murchison Oil Company. Upon completion of the contract with American Petroleum Company, Murchison Oil Company and associates have tentatively arranged to sell their crude on contract to an independent refiner.

Several months ago the Winkler County proration committee, acting with the approval of the commission, granted a special production allowance to a number of the small lease owners in the Winkler County area. The properties of Murchison-Cranfill-Lee Interests were included. The eight wells of the Murchison Oil Company and Cranfill Brothers Oil Company earned under proration rules an average daily yield of 1551 barrels during November, and produced at average rate of 3875 barrels daily, according to pipe line figures. The single well of Murchison Oil Company and T. P. Lee earned an average daily allowance of 572 barrels during November, and actual production, based on pipe line runs, averaged 622 barrels daily.

Curtailment Resolution Adopted by Mid-Continent Association

TULSA.—The meeting of the General Board of Directors of the Mid-Continent Oil & Gas Association on Wednesday, December 19, reflected a Spirit of confidence that the progress which has been made by the industry in a preliminary way through cooperation will ultimately lead to a sane producing program and a stabilization of output in the oil industry. All five states of the Mid-Continent field were well represented at one of the largest and best attended meetings the board has ever held.

The meeting was presided over by Wm. N. Davis, president. Addresses were made by E. B. Reeser, newly elected president of American Petroleum Institute and by James A. Veasey, of the Carter Oil Company, chairman of the sub-committee of the American Bar Association which is preparing suggested legislation to be submitted to the industry to better enable the operators to control their own operations by a majority rule.

A disposition to enter into and become an integral part of the general conservation movement, which is now gathering momentum in the industry, was reflected by the unanimous adoption of a resolution introduced by J. Edgar Pew, which pointed out that great progress can be made toward stabilization by the adoption of a general policy to avoid unnecessary drilling and to encourage the formation of pooling or other cooperative agreements on such new areas which may be hereafter tested, and also placing the Mid-Continent Oil & Gas Association in a position to actively promote conservation programs by authorizing the appointment of a committee of nine members, three from each division, to devise a plan for better organizing the conservation plan throughout the five states of the southwest. This committee, it is under-

stood, will be so constituted as to be able to freely cooperate with any regional committees that may hereafter be appointed by President Reeser of the American Petroleum Institute, to accomplish the same general purpose.

Following was the resolution adopted:

Resolution

"Whereas, The excessive and destructive competition attending each step in the production of petroleum, including leasing, prospecting, drilling and producing, is one of the principal sources of the economic troubles of the oil industry, and is also the source of great economic and, at times, physical, waste of one our country's most important and irreplacable natural resources, and

"Whereas, Research and experience in the industry have shown that these evils can be largely eliminated by lawful methods of cooperation, outstanding among which is the practice of pooling acreage for prospecting and development purposes, and

"Whereas, Such cooperative practices have been recommended by the Federal Oil Conservation Board, the American Petroleum Institute, and the Committee of Nine—composed equally of representatives of the Federal Government, the American Bar Association and the Oil Industry.

"Therefore, it is resolved by this board of directors that all producers of oil be and they are hereby urged to adopt a general policy of restricting unnecessary drilling, of refusing to buy spreads of undeveloped acreage in or about new drilling projects, or to contribute to or participate in the opening of new areas where the acreage has not been pooled or unitized or a cooperative method of orderly development arranged; and

"It is further resolved that the president is authorized and directed to appoint a representative committee of nine to immediately proceed to appoint committees from each division to study and devise the most effective method or plan of operation by which the association may assist in promoting constructive cooperative practices. Such committee is requested to also study the suggestions above made and to be ready to report its plan to this board at the next meeting thereof to be called by the president early in January; and

"It is further resolved that the standing legal committees of each Division be requested to formulate and submit to the next meeting of this Board a lease provision authorizing the lessee to include the royalty and working interests in pooling agreements thereafter to be made, permitting rational development of the area and preserving to the royalty interest its due proportion of the interest assigned to the particular tract in the pooled area; and

"It is further resolved that the royalty owners be invited to participate in the conservation work herein outlined to the end that the whole industry may cooperate to imporve the producing conditions, reduce waste and thus confer inestimable benefits upon all branches of the idnustry as well as the public."

Officers elected for the ensuing year are as follews: Wm. N. Davis, president; W. C. Franklin, vice president for the Kansas-Oklahoma Division; J. D. Collett, vice president for the Texas Division; Geo. O. Baird, vice president for the Louisiana-Arkansas Division; Harry H. Smith, secretary-treasurer.

Tanker Owners Join Movement For Crude Tariff

WASHINGTON, D. C.—When the house ways and means committee in February reaches the free list and takes up the question of imposing a tariff duty on imported crude oil, representatives of the tanker operators will join with the domestic producers in asking for a rate of $1 per barrel on all oil entering the country, it is indicated by information reaching Representative Willis C. Hawley of Oregon, chairman of the committee.

The imposition of a duty on crude is provided for in a bill introduced in the house December 3, by Representative Howard of Oklahoma, who declared at the time that the domestic oil industry was faced with a serious situation because of the heavy imports from Mexico, Colombia and Venezuela.

The oil men point out that when the tariff law was being considered six years ago, practically the only oils that were discussed were those that have an asphalt base, coming from Mexico and Trinidad. Conditions since have changed, they contend, and there now is urgent need for protection of at least $1 per barrel.

"Oil fields have been developed in Venezuela and other countries bordering on the Caribbean Sea," a statement from oil interests, received in Washington, declared. "There has also been a great development in California and in Texas. Cost of production in California and in Texas, we believe, due to the high standard of American labor, is considerably more than in the foreign countries named, so the the American oil industry is handicapped to that extent.

"Another handicap is that of transportation. For Texas to supply the Atlantic Coast ports, American steamers must be employed. For California to supply Atlantic Coast ports or any American ports, American steamers must be employed.

"Oil can be brought from the abovementioned foreign countries to the Atlantic Coast and into the Gulf of Mexico, almost to the front door of the American wells by foreign tankers, tankers that pay considerably lower wages than American tankers, and that do not have to comply with such stringent inspection rules as American tankers do. As we see it, Venezuela and other foreign countries now practically control the Atlantic Coast markets. Many American tankers, to avoid lay up, are compelled to compete in the carrying of this oil with foreign tankers and are doing it at a loss to avoid heavier losses that lay-up would cost and in the hope of a remedy presenting itself before they lose everything they have. So that the Texas and California oil producers are not alone suffering, but the American tank steamer owner also is suffering.

"An American tanker of 10,000 tons requires a rate approximately of 72 cents per barrel of 42 gallons to transport oil from California to New York. The same tanker would require a rate of approximately 29 cents from Texas to New York. These rates are the minimum rates required to enable the owner to set aside six per cent. on his investment and six per cent. for depreciation.

"Foreign tankers are in a position to transport oil from Venezuela to New York at much lower rates.

"The American tanker certainly is included among American industries. The situation as we see it is a grave one from the standpoint of the American oil producer and the American tank steamer owner and we feel that tariff protection should be granted without delay.

"Our own government, we believe, is vitally interested in this, in that we figure that every three tons of oil imported displaces one ton that ought to be moving out of California via the Panama Canal, and naturally deprives the government of Panama Canal tolls which would be collected on tankers with the protection such as would permit California to again compete on the Atlantic Coast."

Texas Division Meets at Dallas

Dallas, Texas.—A meeting of the board of directors of the Texas Division of the Mid-Continent Oil & Gas Association has been called to meet in Dallas, December 27, to consider the promotion of conservation work, unit development, etc.

California Committee

Los Angeles.—The committee named to consummate plans for the conservation of gas in the Santa Fe Springs field will meet January 4 to determine whether a full 80 per cent. of the operators have signed the agreement to use the surplus gas for repressuring the upper or Meyer zone.

Better Refinery Control Reduces Demand for Crude

Increasing cracking operations results in curtailing still runs 26 million barrels during first ten months of 1928

By H. J. STRUTH
Petroleum Economist

IN ANY attempt to gauge the refinery demand for crude petroleum, the producer must necessarily consider the effect of cracking upon still run operations. This is emphasized by the fact that, during the first ten months of 1928, refinery runs of crude to stills were curtailed proportionately with the ability of the industry to increase the yield of gasoline by cracking the heavier products of distillation. An analysis of refinery operations for the period beginning with January and ending with October, of last year, reveals that the aggregate quantity of crude run to stills was 26,000,000 barrels less than the normal amount required to produce the gasoline demand for that period. On the basis of an average gasoline yield of 37.3 per cent, exclusive of natural gasoline blended, the normal quantity of crude required to produce the gasoline demand would have amounted to 778,000,000 barrels. As a matter of fact, the refineries actually consumed 752,000,000 barrels of crude during the first ten months of 1928, thereby preventing the production of an additional 9,698,000 barrels of gasoline that would have, otherwise, resulted in increasing surplus gasoline stocks to more than 36,000,000 barrels on November 1. Although market conditions during this period were not what could be termed extremely satisfactory, they showed considerable improvement over 1927; obviously, as a result of efforts on the part of the refining industry to control its operations.

Figure 1 presents a striking example of what has been accomplished in the various refining centers during the first ten months of 1928. In this chart, refinery crude runs to stills are shown in relation to actual shipments of gasoline, on the basis of the respective percentage of gasoline recovery for the major refining areas. It will be noted that, in most instances, crude still runs were maintained at a somewhat lower level than actually indicated by the demand for gasoline. Under each major refining district still runs of crude are expressed in percentage of normal gasoline demand; the normal demand line representing 100. In table 1 the figures upon which this chart is based are given for each of the refining districts.

In order to determine the actual quantity of crude required to produce the gasoline demand, it was necessary to reduce actual shipments by the amount of natural gasoline used in blending. This resulted in a figure which represented the approximate quantity to be produced from crude and by cracking. These facts show that the refining industry is giving more attention to the control of its operations, in conformity with the demand experienced for its products. Since it is generally conceded that excessive still runs of crude have been mainly responsible for the unsatisfactory conditions which have prevailed during the last few years, it is becoming more evident that the refining industry intends to prevent a recurrence of its former uneconomic practices.

Effect on Producer

All of this has a direct effect upon the producer. Naturally, when the refining industry runs crude to stills beyond the ability of the market to absorb the products of distillation, the producer alone benefits by being able to reduce his surplus storage. However, in the final analysis, the entire industry suffers as a result of flooding the market with refined oils to the benefit of the ultimate consumer. Evidently, the refining industry is beginning to realize that it cannot solve the problems of the entire industry, and has determined to exercise better control over its operations, in an effort to stabilize the market for refined petroleum products. If the refining industry is in earnest, as the results seem to indicate, it is apparent that the producer will experience a proportionately smaller demand for crude from the refiner during the present year. While, of course, the growing demand for gasoline and other petroleum products will require the refining of a greater quantity of crude during 1929, it appears probable that the refining industry will endeavor to further increase the yield of gasoline by cracking, thereby consuming proportionately less crude than formerly.

On November 1, stocks of gasoline at refineries represented a supply of 49 gallons per motor vehicle registered, the lowest point reached since 1921. It is not difficult to realize what might have happened if the refineries had run crude in excess of the normal gasoline demand. In fact, if refineries had run enough additional crude to exactly meet the gasoline demand, without considering their accumulated surplus supply, stocks of gasoline on November 1 would have aggregated an average of 67 gallons per motor vehicle instead of 49, or the same relative quantity that was on hand at the beginning of 1928. Figure 2 shows the trend of gasoline production, demand and refinery stocks for the last few years. In each case this data is interpreted in gallons per motor vehicle registered. It will be noted that although stocks have declined appreciably, and demand has grown at a more rapid rate per motor vehicle than ever before, production is beginning to show a more marked rate of increase. This is apparently due to the fact that, while still runs of crude are being curtailed, cracking operations are more than offsetting this effect by accelerating the output of motor fuel. As matters stand now, it is apparent that further curtailment of crude still runs is in order, since the yield of gasoline is beginning to turn sharply upward. Further evidence of this is obtained from the fact that the yield of gasoline showed an increase of 2.81 per cent between the months of June and October, 1928. During the month of October, the actual yield of gasoline from crude was 38.99 per cent.

Refiner Controls

Perhaps, from the producer's standpoint, the ability of the refining industry to ob-

TABLE 1

REFINERY STILL RUNS SITUATION
FIRST TEN MONTHS OF 1928

(Millions of Barrels)

	Gasoline Shipments	Produced From Crude	Per Cent Yield	Crude Still Runs Required	Actual	Per Cent
East Coast	47.8	42.5	30.3	152.5	139.8	92
Appalachian	13.4	12.6	45.7	28.4	27.8	98
Indiana-Illinois	45.5	43.7	53.3	82.2	81.7	99
Oklahoma-Kansas	51.4	46.2	49.8	94.6	92.6	98
Texas	67.5	61.2	39.8	155.8	153.0	98
Louisiana-Arkansas	21.4	17.3	27.8	61.5	61.8	100
Rocky Mountain	14.4	12.6	57.8	23.0	21.6	94
California	57.5	44.6	25.7	185.9	173.7	93
Total United States	318.9	280.7	37.3	778.0	752.0	97

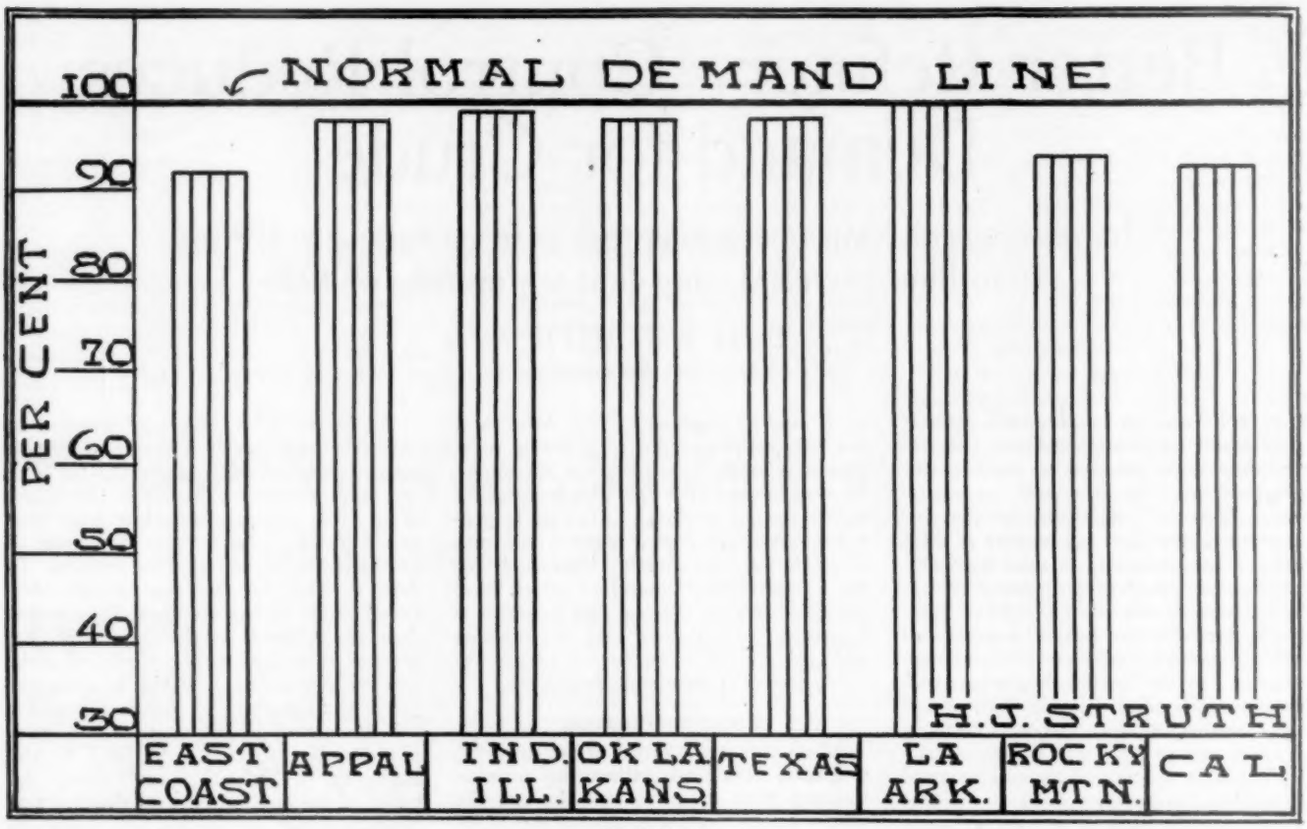


FIGURE 1

Refinery Crude Runs to Stills Expressed in Per Cent. of Normal Gasoline Demand. Shows how refineries have controlled their runs during the first 10 months of 1928.

tain a greater yield of gasoline from crude by the cracking process is not conducive to improvement of the industry's overproduction ills. However, if we give careful consideration to all factors, it appears logical to believe that the ultimate consumer market is of primary importance to the entire industry, and any improvement in the market for refined products is bound to be reflected favorably in the general situation. In former years, market improvement began with a mark-up

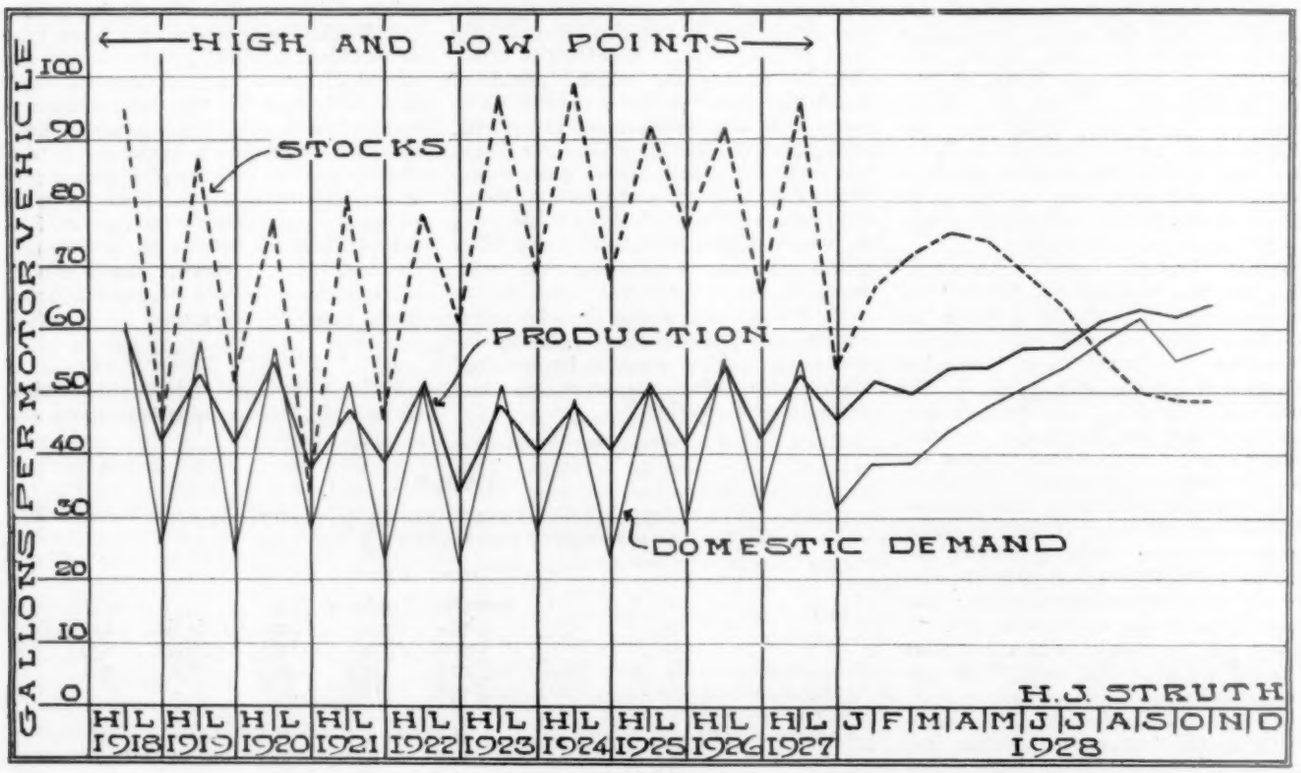


FIGURE 2

Gasoline Production, Domestic Demand and Stocks Expressed in Gallons Per Motor Vehicle Registered. Shows how stocks have declined with demand reaching highest levels in history. Note upturn in production, for which cracking is mainly responsible.

in the crude market, to be followed by a general increase in refinery prices and in the retail market. Now, it begins to look as if conditions are going to be reversed; the refiner, by preventing an oversupply of petroleum products, will improve his market situation, which in turn will eventually become reflected in the crude oil market. In view of present conditions, however, it is exceedingly doubtful whether any marked improvement will take place in the crude oil market during the early part of 1929. Consistent gains in petroleum production, accompanied by a slackening in the refinery demand for crude, is not very encouraging to the producer. This situation places added emphasis upon the need for definite action to obtain co-ordination in controlling the production of crude. While some progress has been made in this direction, it is the generally accepted belief that we have hardly "scratched the surface" with respect to the curtailment of flush production. As long as the real and potential supply of crude continues to exceed the demand by such a wide margin as now indicated, it is a certainty that we can expect no improvement in the producer's market.

Regardless of the fact that there is a large overproduction of crude, the refining industry is entitled to a greater average yield of gasoline from crude, and cracking is the only sound method of insuring the greatest returns from every barrel of crude refined. On November 1, refinery stocks of gas and fuel oil aggregated 136,723,000 barrels. This supply is far in excess of immediate and future market requirements and represents about 40,000,000 barrels of gasoline, which would still leave a more than adequate supply of domestic and industrial fuel oil. Refinery statistics for recent months show that refiners are turning their attention to the cracking of these surplus stocks. Although this practice will not alleviate the crude supply situation, it is nevertheless, sound economic practice. If it were not for the cracking process, the yield of gasoline from crude, during the first ten months of 1928, would have been only 24 per cent. This means that the refineries would have required 1,210,000,000 barrels of crude, or 458,000,000 barrels more than was actually consumed. At this rate, crude stocks would now be entirely exhausted and the industry would become panic-stricken over its inability to supply the refinery demand. As a matter of fact, if the refining industry had more fully utilized its cracking facilities during the first ten months of 1928, it would have been possible to produce the same quantity of gasoline from 30,000,000 barrels less than the actual results show.

Figure 3 shows what cracking has accomplished for the refining industry in various sections of the United States. This chart shows the percentage of gasoline recovered from crude for each of the major refining divisions, divided into the percentage recovered from straight distillation and the additional recovery obtained from cracking. Table 2 contains the figures upon which this chart is based.

At the present rate of gasoline recovery from crude, surplus stocks of crude represent about 132,000,000 barrels of gasoline. By full utilization of the cracking process they represent considerably more. Although the refining industry is considered apart from the producing industry, there is, nevertheless, an economic relation between them that must be given due consideration. If we consider the combined situation, as it applies to refinery gasoline, we obtain the following picture:

TABLE II
WHAT CRACKING HAS ACCOMPLISHED DURING 1928
(First Ten Months)

	Crude Run (M. Bbls.)	Straight Gaso Prod. (M. Bbls.)	%	Cracked Gaso. Prod. (M. Bbls.)	%
East Coast	139.8	24.7	17.6	17.8	12.7
Appalachian	27.8	9.0	32.4	3.7	13.3
Indiana-Illinois	81.7	24.8	30.2	18.9	23.1
Oklahoma-Kansas	92.6	30.1	32.5	16.1	17.3
Texas	153.0	35.3	23.2	25.3	16.6
Louisiana-Arkansas	61.8	11.0	17.5	6.3	10.3
Rocky Mountain	21.6	6.8	31.1	5.8	25.7
California	173.7	39.1	22.6	5.5	3.1
Total United States	752.0	180.5	24.0	99.4	13.3

GASOLINE SUPPLY SITUATION

	Million Barrels
Stocks of refinable crude on hand Jan. 1, 1928	372
Production, first 10 months	745
Imports, first 10 months	66
Total Crude Supply	1183
Proportion gasoline at 37.3 per cent. recovery	441
Gasoline stocks Jan. 1, 1928	32
Gasoline imports, first 10 months	4
Total visible gasoline supply	477
Gasoline consumption, first 10 months	319
Visible gasoline surplus	158
Actual refinery gasoline stocks Nov. 1, 1928	26
Available from crude storage	132

In summing up the situation from the producer's standpoint, it is apparent that the early part of 1929 will be accompanied by continued curtailment of crude runs at the refineries. This indicates that the surplus crude supply will not be reduced as rapidly as may have been anticipated. While there will undoubtedly be a greater demand for crude petroleum during the present year, it is now believed that the early part of the year will witness further gains in the utilization of refinery cracking facilities, which will result in a proportionately lower demand for crude. Thus, it is shown that the producer must necessarily consider the effect of cracking in an effort to determine the quantity of crude that will be required by the refineries.

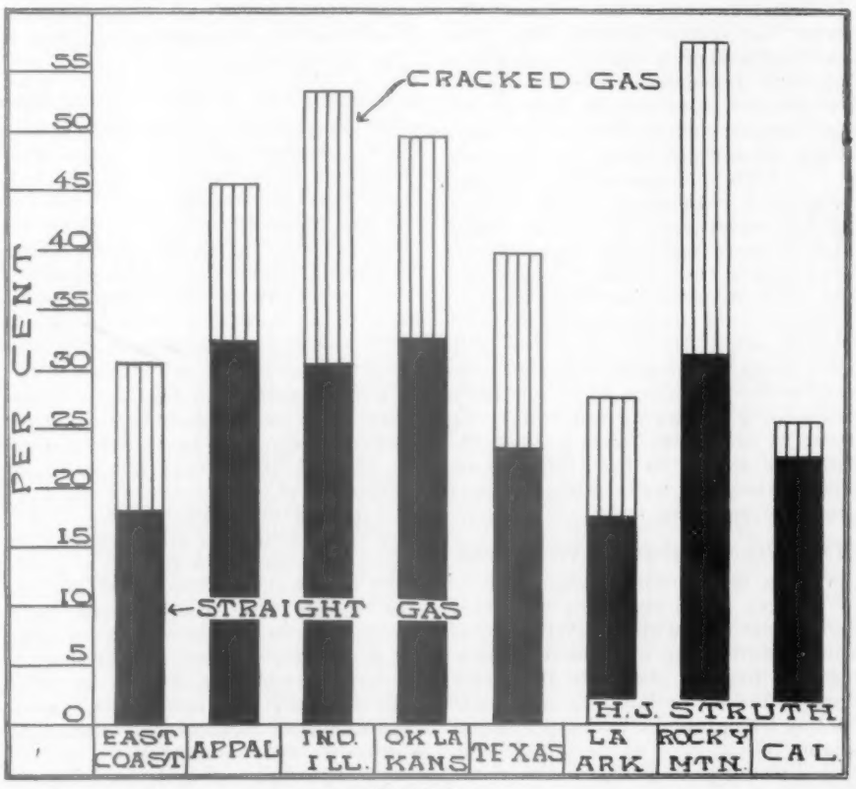


FIGURE 3
Gasoline Yields from Crude in Various Refining Centers. First 10 months of 1928. Black portion of bar represents percentage of recovery from straight distillation. Ribbed portion—percentage of gasoline from cracking. Percentages based upon crude runs through stills.

St. Louis Offers New Threat With Mile Extension

Oklahoma City well still producing 5700 barrels from formation which has been identified as Hunton lime, to drill to Wilcox

By WARREN BAKER
Staff Representative

TULSA.—As a result of a 200-barrel-per-hour well one mile north of the old Wilcox sand producing area at St. Louis, that field is again rated among the foremost market factors of Oklahoma. Like the St. Louis field proper the new producing area is expected to be quite small in territory covered, but rich where production is found. St. Louis now takes on the outlook of the Earlsboro field. Many times it was thought that the Earlsboro field was defined completely, but additional drilling around the edges would open up more producing "pimples," and after more than two years of development that field is yet undefined.

The St. Louis pool extension well was T. B. Slick's Davis 1, NEc W½ NE Section 18-7-5. It swabbed 772 barrels in 19 hours from Wilcox sand 4102-07 feet. The well was deepened one foot and commenced doing 200 barrels hourly. A direct connection with the producing area of St. Louis is prohibited since several dry holes lie between the two. The adjacent territory has several Hunton and Simpson sand wells but this is the first Wilcox oiler and first big well. Magnolia Petroleum Company is the largest acreage holder, with several thousand acres of scattered leases.

The Slick well resulted in St. Louis production jumping to a new peak of 137,331 barrels from 261 wells. Fifty-nine of these wells are in the Wilcox sand and averaged 60,659 barrels for the week. One hundred and forty-four Simpson sand wells averaged 30,426 barrels, while 70 Hunton lime wells were doing 3652 barrels, and one stray sand well was making 13 barrels daily. 118 wells are showing salt water. Of these 38 are in the Wilcox, 70 in the Simpson, and 10 in the Hunton lime. Thirty completed wells in the field have stopped producing.

Two Wilcox Failures in West Maud

Wilcox sand production possibilities of western Maud continues to have a gloomy outlook, with two Wilcox sand failures during the week further defining the district. Amerada Petroleum Corporation's Gossland 1, NEc SW Section 8-8-5, found a hole full of water in the Wilcox sand from 4328-34 feet. It will probably be plugged back to the Hunton lime where it is good for around 700 barrels per day.

McMan Oil & Gas Company and White Eagle Oil & Refining Company's Roberts 1, NEc SW SE Section 9-8-5, also has a hole full of water from the Wilcox sand at 4650-67 feet. This well defines the west edge of Wilcox sand production in eastern Maud. No additional completions were made in the Wilcox district of east Maud, although several tests are getting deep.

The Hunton and Misener formations in Western Maud continue to yield much new production and the output jumped to a new high of 22,671 barrels from 17 wells. This is offsetting the decline in the other Seminole pools and caused the recovery of Greater Seminole to increase to 277,009 barrels. A steady increase in the production of Maud is anticipated from the large number of completions due to be made.

The Maud district is the most active of Seminole areas, with 85 drilling wells out of the 220 in Greater Seminole. The Mission field has 75, with 52 at Earlsboro, 40 at Little River, and five each at Bowlegs and Searight and one at Seminole proper. There are a total of 263 operations in Greater Seminole with 36 rigs and seven locations made up the remainder in addition to 220 drilling wells.

Oklahoma City Well in Hunton Lime

A study of the producing formation of the Indian Territory Illuminating Oil Company's No. 1, C SE SE Section 24-11-3w, six miles south of Oklahoma City, showed it to be in the Hunton lime. With the establishment of this fact many operators expressed their belief that the area between Seminole and Oklahoma City might be found highly productive in the lime horizon.

The discovery well continues to flow over 5700 barrels daily while cutting one per cent. It is being drilled deeper, below 6451 feet, and will go to the Wilcox sand. Since its present horizon is the Hunton, possibilities of Wilcox sand production are thought to be small, as it should be found too low.

In the meantime other operations in the vicinity are getting under way. Most important of these is the starting of a well by Briscoe and Hall on a 10 acre tract in Section 14-11-3w. This will probably call for offsets, and it was hoped to eliminate all drilling to the center of 40-acre tracts.

An important test in determining the Hunton lime possibilities between Seminole and Oklahoma City is one by the Superior Oil Corporation in Section 24-8-2e. This test has drilled about 110 feet past the top of a string of casing lost in the hole, and has about 35 or 40 feet additional to drill. Progress is very slow but steady. The test has a very good showing from the Hunton lime through rotary mud and is generally thought to be a well.

Another trend of exploration is developing from the Oklahoma City well. It is in a southeastern direction toward the old Sooner State Oil Company's well on the Bates farm, C SW Section 15-7n-1w. This test is shut down at 3120 feet. Correlations are said to show that the Pennsylvania formation was encountered high in this test and with evidence that big pay lies below 6000 feet. It is expected to be deepened.

McCully Pool Gets Its Biggest Well

The largest well ever completed in the McCully pool of Logan County, western Oklahoma is the Shell Petroleum Corporation's McCully 4, SE NW SE Section 30-19-4w, one location west of production. The well has the pay from 5970-75 feet, and is doing 250 barrels per hour. It now appears that the producing trend will run to the west of the discovery well, whereas development has been to the north. A number of other tests are due to be completed at McCully.

This development also means much to western Oklahoma, especially since it occurred along the Oklahoma City strike.

Wilcox Campaign for Allen

Indications are that a drilling campaign similar to the spectacular rushes in Greater Seminole will shortly be seen at Allen. That is unless rigid restriction of drilling is adopted. T. B. Slick will drill his well in Section 24-5n-7e to the Wilcox sand. It is running high and has an excellent opportunity of finding production, which would mean more than two miles of territory for drilling between two Wilcox sand wells. Slick will shut his well down in the top of the Wilcox.

Although nothing of a definite nature is known about the potential of Allen, it is looked upon with a great deal of favor.

West of the Allen field Homaokla Oil Company's Ritchey 1, NE SW SE Section 1-4n-7e, is doing 200 barrels per day from an unidentified sand at 1990-2006 feet. It is expected to be a better well when completed.

Winkler County Output Increased to 175,000 Barrels

Texas Railroad Commission authorizes increase of 25,000 barrels daily January 1; water encroachment responsible for move

By H. H. KING
Staff Representative

SAN ANGELO, Texas. — Production allowance in Winkler County under proration rules is to be restored to 175,000 barrels daily effective on the morning of January 1, according to official notice given operators by the Texas Railroad Commission December 19 after holding a special hearing on the matter at Austin on the preceding Monday. The increased quota amounts to 25,000 barrels daily above that permitted in the county since October 1. However, actual production will run above the figure established by the commission in the interest of conservation, since two groups of operators in the Hendrick field have a temporary injunction against proration enforcement that permits the flowing of their nine wells at a maximum rate of 5400 barrels daily.

Difficulty in preventing old wells from being drowned by water encroachment through comparatively small daily production quota was the principal factors in the allowable production for Winkler County being raised, while about the time that the increase takes effect the Atlantic Pipe Line Company will put into service its West Texas trunk line system to tidewater. This line is rated good for 40,000 barrels daily, and will be almost entirely dependent upon Winkler County for a crude supply, as only a small amount will be relayed via Magnolia Pipe Line Company's line from Crane County to Atlantic Pipe Line Company's Midland station, while the latter's only other connection is with a small lease in Coleman County.

The 25,000-barrel increase to be granted Winkler County operators will boost average daily output of present completed wells about 63 barrels each, as the 470 producing wells in the county average 319 barrels daily with a 150,000-barrel daily quota, and 372 barrels daily average at the higher figures. Atlantic Pipe Line Company will not be successful in obtaining a full line capacity from Winkler County even with the increased production allowance, as other crude purchasers are desirous of increasing their current purchases in the county, and no oil is available below the posted price of 65 cents per barrel at the well.

More than one-half of the tests remaining to be completed in the Hendrick field proper are owned by the Southern Crude Oil Purchasing Company, which holds joint interests with the Dixie Oil Company and R. A. Westbrook Interests. These operators have 37 tests in the big lime and drilling in, or awaiting standard tools to complete, while all other operators have only 29 tests in this stage. Southern et al have seven other tests drilling above the lime horizon, while other operators have only five. Although Southern et al lead in allowable production, the delay in completing their large number of tests has greatly cut down their allowance.

Extending the west side of the Hendrick field two locations, Gulf Production Company's Ida Hendrick 1 is flowing 425 barrels of 29 gravity oil daily after drilling 47 feet of pay to 2885 feet. Pure Oil Company, Atlantic Oil Producing Company and Independent Oil & Gas Company

(Continued on page 36)

World's Deepest Well Increases Production Steadily

SAN ANGELO, Texas.—The flow of oil and gas from world's deepest well recently completed in the Big Lake field by the Texon Oil & Land Company's University 1-B, Group One, from pay at 8500-8523 feet has registered an almost steady gain during the first three weeks on natural production, and during the 24-hour period ending December 24 the gas was estimated at 12,500,000 cubic feet accompanied by 1125 barrels of 53 degrees gravity (corrected) oil. The performance of this well in establishing new records on oil and gas flow serves to bear out the contention of the drilling crew that a much larger producer will follow any further penetration of the pay, which is generally believed to be the upper series of the Pennsylvania. Deeper drilling is now impossible without killing the gas, as the rock pressure is too great to lower tools in the five-inch hole, with 5 3-16-inch casing cemented at 6184 feet.

The increased volume of oil and its unusually high gravity now enables Texon Oil & Land Company to mix it with its production from the regular pays in the Big Lake field and realize the top Mid-Continent gravity scale price of $1.76 per barrel on the 4000 barrels of production in the field. Texon Oil & Land Company's production is contracted for the life of the property at the average Mid-Continent scale price, and no advantage in price is to be had in keeping the deep oil separate as long as 44 gravity and above is the highest recognized grade. The temperature of the oil as it flows from the deep well is 49 degrees Fahrenheit, according to L. N. Nickey of the Texon Oil & Land Company. The oil is transparent, and registers 56 gravity (corrected) at the gas trap, but averages 52-53 gravity in the stock tanks. The color and gravity would probably be improved slightly if a small showing of oil, testing 41.7 gravity, could be cased off at 6284-99 feet, as the well has 2339 feet of open hole.

Carl G. Cromwell, the lone driller on the Texon Oil & Land Company's discovery well of the Big Lake field, has superintended the drilling of the world's deepest well, with J. E. Willoughby, assistant. Other members of the crew on the well were D. E. Vandervort and W. H. Clifton, drillers, and Harry Cromwell and L. H. Lunsford, tool dressers.

Oil and gas production gauges taken on the Texon Oil & Land Company's University 1-B, Group One, from the 8500-8523-foot pay, with a small quantity of production coming from upper pay at 6284-99 feet, follows:

	Barrels	Cubic feet gas
December 1	17	86,000
December 2	18	.....
December 3	78	2,900,000
December 4	260	6,000,000
December 5	402	7,000,000
December 6	477	8,800,000
December 7	615	9,144,000
December 8	552	9,300,000
December 9	635	9,500,000
December 10	674	10,547,000
December 11	740	11,000,000
December 12	754	11,000,000
December 13	819	11,000,000
December 14	877	11,000,000
December 14	875	11,000,000
December 16	892	11,500,000
December 17	952	11,900,000
December 18	982	12,300,000
December 19	1,020	12,300,000
December 20	1,060	12,300,000
December 21	1,070	12,400,000
December 22	1,090	12,500,000
December 23	1,112	12,500,000
December 24	1,125	12,500,000

Drilling for Deep Oil in Allen Field Has Its Attractions

TULSA.—Gambling against chance for deep Wilcox sand production gives the operator some odds if there are a couple of shallower pay formations under the acreage to plug back to for production in case the deep stuff is barren. Too, vast operating losses are offset considerably if exploiting for deep pay is being done on income from that particular lease made through production from highly productive upper sands. Furthermore, the high probability of the existence of deep pay under leases that are being drilled primarily for shallow production enables the operator to start with a hole sufficiently large to pass up the shallow stuff in the event it fails to produce profitably. And, fair knowledge of the existence of deep pay enables the operator to produce from the shallow sand and later deepen to bigger pay after the large hole has been drilled.

Oklahoma fields, especially the most recent ones, have had this situation in many cases, as production from Hunton lime, Simpson sandy lime and Wilcox sand in a number of the Seminole fields and St. Louis. Probably the outstanding case, however, is found at Allen field of Pontotoc, Seminole and Hughes counties, where the Cromwell sand-Wilcox combination promises to give a high profitable yield ultimately from this area. It is more interesting still that the field's discovery production came from around 700 feet, from which depth the profits were proportionately large.

Allen field, being among those which have suffered comparative neglect due to the proverbial "greener grass" across the fence at Seminole, is less than one-half as active as its flush production would warrant under normal price conditions in the industry. It is predicted by producers to become one of the major interests among fields of the state when Greater Seminole activity declines.

A lone Wilcox sand well at Allen field stands for more than 50 per cent. of the enthusiasm manifested in the area. It is Sinclair Oil & Gas Company's Amos 2, SE NE SW Section 7-5-8, on the Seminole County side of the Canadian River, which about four months ago flowed 50 barrels an hour from Wilcox at 4158-60 feet and which was pinched to a small yield in furtherance of conservation movements under way to curtail competitive drilling.

The Sinclair's Wilcox discovery here upset the once accepted geological theory that Wilcox sand at this or nearby points dipped as low as 12,000 feet. It is higher here than the average top in the five Seminole fields and St. Louis, and rises sharply to the south, outcropping along the northern edge of the Arbuckle Mountains. This discovery gave to Allen field its third producing horizon, the second having been Cromwell sand, ranging in depth from 2450 to 2700 feet. Allen's first deevlopment in the southeast corner of Township 5-8 was very small, but profitable due to unusually shallow depth and low operating costs. The Cromwell sand wells, under normal conditions, are drilled in slightly more than a month and average around 500 barrels initial flow. The best has been a 3000-barrel well, and the latest, The Texas Company's Lucy 4, NW NE NW Section 19-5-8, flowed 1200 barrels natural from 60 feet of Cromwell sand topped at 2600 feet November 14. It raised the field's production to 24,605 barrels from 154 wells, including approximately 80 shallow producers of little consequence. The Cromwell sand wells hold up in production more than the average Oklahoma field, and few edge spots have been defined as limiting extensions that have continued to be made for the past 15 months.

Provide for Deepening

The trend of the average policy since Sinclair's Wilcox discovery has been to start wells with larger holes in order to permit deepening after exhaustion of Cromwell sand pay, or to continue drilling in event of finding the latter horizon dry.

The second Wilcox sand test, Westheimer & Daube's Milner 4, near the southeast corner of Section 8-5-8, failed to find a show of oil in Wilcox sand at 4176-94 feet, but has little effect in weakening the estimates of operators concerning the field's chances in the Wilcox. The failure lies one and one-half miles east and almost a mile south of the discovery well of Sinclair Oil & Gas Company. The old shallow producing acreage to the south has not been tested for Wilcox possibilities.

Another discovery serving to prove the extensive outlay of productive acreage is Homaokla Oil Company's Richie 1, near the center of the southeast quarter of Section 1-4-7, which produced 180 barrels August 22 from sandy lime (considered Cromwell) at 2003-07 feet. Its present yield is 150 barrels, flowing natural. This well widened the productive area of Allen field aprpoximately three miles southwest of both the old shallow stuff and the southern end of the Cromwell sand discovery production. Dixie Oil Company is drilling Master 1, which offsets Richie 1 two locations to the east. Conservative development policies at present has resulted in postponing drilling around this discovery, it being among the best wells south of the river.

Allen field activity at present amounts to approximately 40 operations.

Production by companies November 15 is listed below as follows:

Company—	Wells	Production
Louisiana Oil Refining Corp.	33	3767
Homaokla Oil Company	23	2075
Ramsey Petroleum Corp.	19	1945
Westheimer & Daube	9	1518
C. B. Shaffer	6	510
Barbara Oil Company	1	30
Mid-Continent Pet. Corp.	13	2039
Sunray Oil Company	12	3405
Indian Territory Illuminating Oil Company	4	1018
T. B. Slick, Inc.	1	25
Magnolia Petroleum Co.	2	432
Anderson Pritchard Oil Corporation	6	1501
Sinclair Oil & Gas Co.	5	1044
Gilcrease Oil Company	3	903
Gypsy Oil Company	9	890
The Texas Company	8	2754
Burke-Gries Oil Company	1	749
Total	154	24,605

Sedgwick County Extension North Indicated by Producer

TULSA.—The Wichita area of Sedgwick County, Kansas, took on a greatly enlarged potential outlook during the past week with several important developments. Foremost among these was the good showing found in the Tom Slick, Inc., Pryor & Lockhart, and Aladdin Petroleum Corporation's Smyser 1, NW SW SE Section 36-25-1w, two miles north of the Wright pool, and directly in line with the Goodrich field. In view of this showing it appears that the field extends considerably to the north.

The showing of the Smyser test came as a general surprise, as it is 60 feet below the depth of the Wright pool discovery well. It has a total depth of 3438 feet, and was carrying 1000 feet of water. Oil has filled up 2000 feet in the hole. Pipe will be run to shut off the water and the show tested. The pay stratum is expected to be thin due to the well's depth, and it is not expected to make a big producer. However, the finding of a small well in this location is of great importance.

Four miles northwest of the Wright pool, Connell Oil Company's Cross 1, NEc 27-25-1w, has a showing of oil at 2660 feet in lime pay. This showing is good for 10 barrels daily. It is being drilled deeper and will no doubt go to the Wilcox sand.

Marland Production Company's Goodrich 1, Section 16-25-1e, has been cased and cleaned out. It flowed 1906 barrels the first eleven hours, partly pinched. Pipe line facilities will handle only 3000 barrels per day, and the well will be permitted to flow no additional amount until larger facilities can be constructed. In the meantime it will be allowed to flow steady at the reduced rate.

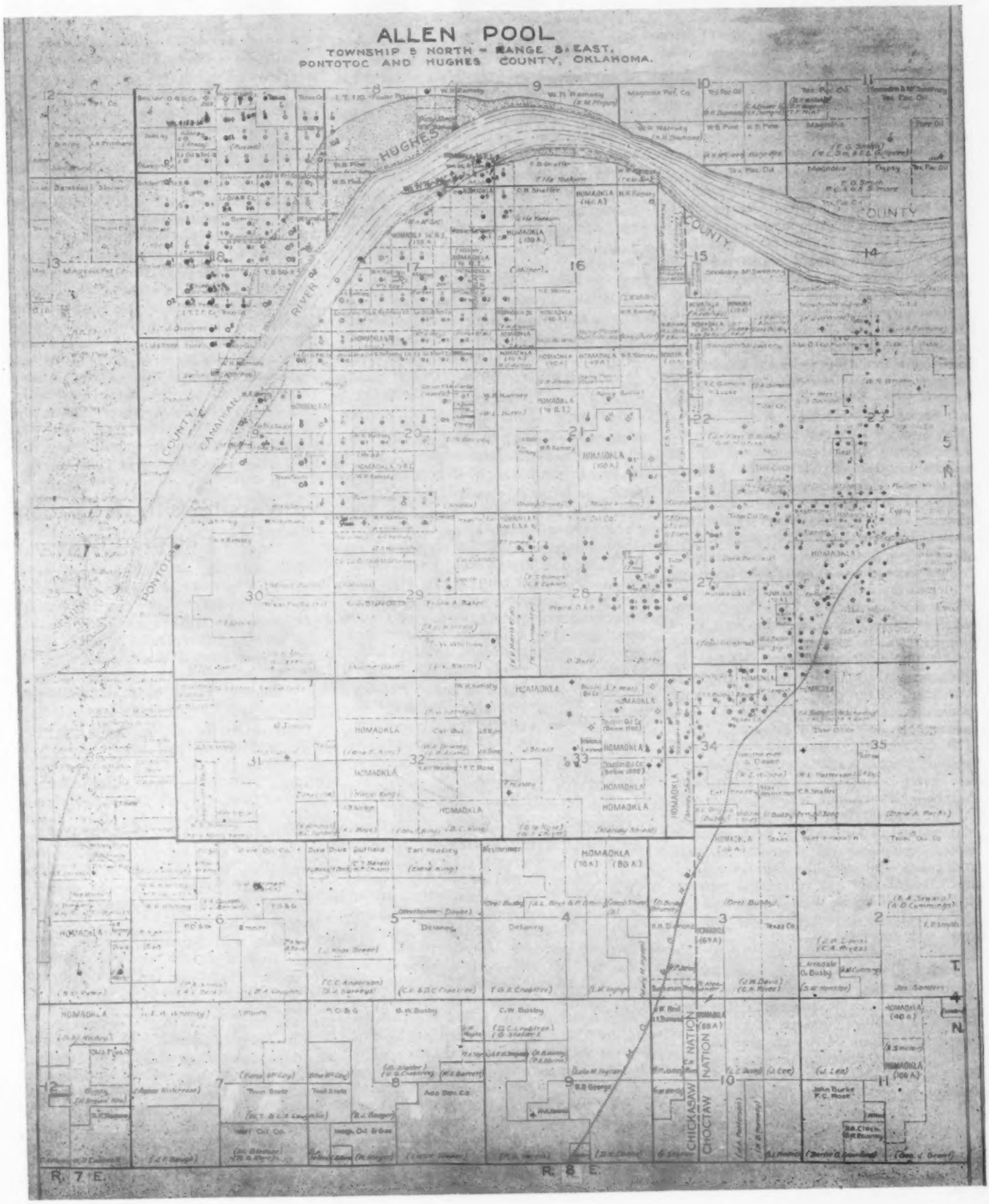
Wilcat operations in Western Kansas were featured by two good showings in Ellis County, which is rapidly taking the lead from other counties in Western Kansas. Empire Oil & Refining Company's

Wahn 1, NEc Section 21-12s-19w, ten miles northwest of the town of Hays, has topped the Oswald lime at 3495 feet. The well has a very good showing through about 100 feet of cavings.

Derby Oil Company's Kraus 1, in Section 17-14s-19w, about 12 miles south of the Empire-Wahn test, has oil at 3827 feet. It is expected to be tested out very shortly. Derby owns about 10,000 acres surrounding the well, which looks like a real oiler.

R. Ogarrio has been elected vice-president of The Texas Company in charge of the producing department; also a vice-president of The Texas Corporation.

Santa Barbara, Cal.—Rio Grande Oil Company and Barnsdall Oil Company have completed Luton-Bell 3 with an initial production of 6000 barrels of 37.5 gravity oil, giving the new Elwood field the greatest boost it has had since the discovery well was completed several months ago. This unusual well was completed at 3317 feet and brings the field production to 16,000 barrels from only four wells.



Winkler County Output Increased to 175,000 Barrels

(Continued from page 33)

will have to drill offsets, as this producer is located in the southeast corner of the northwest quarter of Section 44.

Gulf Production Company's new producer gives the Hendrick field a width of three and one-half miles at this point, although the average width of the producing area is less than two miles, while the length of the field is about eight miles.

The second producer for the O'Brien pool, Winkler County, was in process of completion early this week when the L. H. Wentz Oil Company's Horton 1, three locations northwest of the discovery well, developed a hole full of oil from streaks of pay at 2745 to 2760 feet, but failed to flow when carried to 2950 feet.

Barnsdall Oil Company's Morton 1, a northeast offset to the discovery well of the O'Brien area, remains a puzzle to operators with drilling underway at 3100 feet in shale and with no oil or gas showing. This test is now 125 feet below the level of the bottom of the hole in the discovery well.

Territory to the north and south of the Pecos Valley Oil Company's wildcat producer on land owned in fee in Northwestern Pecos County is to be explored shortly, and the above concern has made location for Fee 2 to be in the south corner of Section 34, block 3, H&TC survey. The discovery well is holding at its initial flow of 125 barrels of 36.5 gravity oil daily at 1626-28 feet. Talbot-Dittman et al's D. K. Unsicker 1, located at the center of the southwest one-half of Section 25, block 10, H&GN survey, is drilling at 565 feet, and will throw some light on the area to the south of the producer.

The California Company's wildcat test on University land in Northwestern Hudspeth County is encountering unusual difficulties in negotiating the hard sloping formations, and has only made 248 feet of hole after spudding October 12. This wildcat is being drilled by R. J. Wallace, and the crew is forced to shoot almost every foot of formation, then cement the hole to prevent crookedness. The California Company has abandoned original plans to make a real deep test of its Foster 6, located in the Iatan pool, Mitchell County, but will do so in this area in the near future when a more suitable geological location has been selected. Recent completion of a commercial oil and gas producer in the Big Lake field at 8500-8523 feet has stimulated interest in deeper drilling in West Texas, and the above company expects to make one or more trys for same.

Dallas, Texas.—Pipe is now being strung by the Southern Union Gas Company, which is controlled by the Murchison Oil Company, Dallas, for the construction of a network of natural gas distributing lines to serve Hempstead, Bellville, Brenham and Somerville, aggregating about 45 miles of four and six-inch lines. The gas supply will be obtained from the completed wells in the Raccoon Bend field, Austin County. Sixteen miles of six-inch line will be built from the field to Brenham, with a 16-mile four-inch extension to reach Somerville. Bellville will be reached with a four-mile four-inch extension from the above line, while eight miles of four-inch pipe is to be built from the field to Hempstead.

These towns are expected to require a total of about three million cubic feet of gas daily, and no booster stations will be needed, since the wells have a rock pressure of more than 900 pounds. Clint W. Murchison, Dallas, is president of the Southern Union Gas Company, which also has a natural gas system in West Texas that delivers Hendrick field gas to Wink, Pyote, Wickett, Monahans, with an extension under construction to Pecos. M. Ulmer, is superintendent in charge of the construction work on the system being built from the Raccoon Bend field, with headquarters in the Marvin Building, Dallas.

Dallas, Texas.—Atlantic Pipe Line Company began filling its West Texas trunk line system, which extends from Midland station and tank farm to Atreco, a distance of 509 miles, with crude December 19, according to R. W. Howe, general manager, but operation of the 11 main line stations will not begin until about January 1. This line is rated good for 40,000 barrels, or more, daily, and is connected with the Hendrick field by Atlantic Pipe Line Company's original 71-mile 10-inch carrier, while crude will be received from the Church & Fields area, Crane County, at Midland through the Magnolia Pipe Line Company's system. Atlantic Pipe Line Company's trunk line taps a small pool in Coleman County also, but is largely dependent upon Winkler County for its crude supply.

J. H. Wood, who has been in charge of the welding and pipe line construction work on Atlantic Pipe Line Company's new system, has been appointed superintendent of operations, with headquarters at Dallas.

Amarillo, Texas.—Barnsdall Oil Company's wildcat test on the L. R. Hagy land near the center of the east line of Moore County opened a new oil producing area for the Texas Panhandle district late last week with assurance of a commercial well after drilling eight feet of lime pay to a total depth of 3234 feet. The hole filled with oil, and work was suspended to erect tankage. This wildcat is located in the northwest corner of the Thos. Ross survey, and about five miles north of the prolific pool opened by Skelly Oil Company on the Armstrong-Byrd ranch. The new strike encountered first gas production at 2900 feet, and the flow increased to 20,000,000 cubic feet at 3100-3205 feet, but was cased off when six-inch was set at 3210 feet.

Phillips Petroleum Company's J. T. Sneed-James 1, located near the Skelly Oil Company's producers on the Armstrong-Byrd ranch, failed to fulfill expectations on production, but is averaging 250 barrels daily on the swab after shot of 80 quarts in lime at 3148-92 feet. Skelly Oil Company's three producers in this pool averaged 995 barrels daily each during the past week.

Washington, D. C.—A contract for the purchase of Salt Creek royalty oils by the White Eagle Oil & Refining Company and The Texas Company, jointly, at a figure 21.75 cents per barrel above the highest posted field price in the Mid-Continent field or the Salt Creek field, whichever is higher, has been awarded by the Secretary of the Interior, it has been announced.

The contract to the two companies was made after it had been found necessary to reject all bids submitted in October becaues the highest bidder failed and refused to furnish evidence believed to be necessary and essential. The bid in question was submitted by William L. Walls, Cheyenne, Wyo., offering 42 cents per barrel above the highest posted field price, but the bidder failed to furnish a full statement of financial ability or a showing of his ability to take and dispose of government royalty oil for the three years beginning January 1, next. Rejection of the formal bids was followed by a request for offers at private sale, the joint offer being the most favorable.

University Offers Course In Petroleum

Los Angeles. — Inauguration of a course in petroleum lasting 12 weeks has been announced by the University of Southern California. This course, covering the petroleum industry generally, was started December 10 as an evening session to be held at University College, Transportation Building, Seventh and Los Angeles Streets.

The origin of oil, methods of production, refining and distribution, organization and financing of oil corporations and leases, the association of oil and water, tests for determining good gasoline, valuation of oil lands and other important phases of the industry will be covered in the course running to March 1. Allen E. Sedgwick, head of the geological department of the university, will be in charge of the course.

Classes will be held once a week from to 9:20 o'clock, and registrations are being taken on the 13th floor of the building.

Big Spring, Texas. — Considerable damage was sustained by the Roberts-Chalk field pump station on the Big Spring Pipe Line Company's line December 22 when fire broke out in the pump house. This line is supplying crude to the Big Spring Refining Company's plant, located west of Big Spring.

Rate of Decline Makes Buckbee Sand Less Attractive

Many tests planned originally for the lower production at Santa Fe Springs will be halted in the intermediate zone

By BRAD MILLS
Staff Representative

LOS ANGELES.—Attracted by the performance of the intermediate zone and its freedom from water near the center of the field, some of the major operators have radically shifted their plans to include this upper formation before giving further thought to the Buckbee zone. The thickness of the intermediate zone and its accessibility art not to be denied. Operators holding leases near the apex of the structure are carefully coring between 5000 and 5500 feet, with the thought of completing wells above the Buckbee zone if the formation warrants such a change.

Several important development have shown that a general shifting may improve the status of many wells originally intended for the Buckbee zone. The thickness of the formation will not exceed 200 feet except in extreme cases, and edge leases will not fare nearly as well. On the other hand, the intermediate zone is 500 feet thick on top of the structure and does not contain water at any level. As promising as the zone appears, however, it underlies a much small area than either the Meyer or Buckbee zone.

Union Oil Company has decided to stop and test eight of its wells in the intermediate zone, unless adverse developments in the first of the group cause another shift. All of the eight wells in question are located fairly high on the structure and should cut a maximum of the intermediate zone. This decision means that that company believes it better to stop and produce the intermediate zone than to continue to the Buckee at this time, despite the mad rush the lower of the two formations. The plan is still tentative, however, and subject to still deeper drilling if the intermediate zone shows unexpected breaks.

Buckbee Pressure Decline

Rapid decline and the presence of water in the Buckbee zone have caused some alarm, indicating that the gas pressure will fall rapidly. This condition has caused a sharp increase in the number of wells coring through or for the intermediate zone. It has been definitely proven that the Buckbee zone will underlie a much greater area than the intermediate zone, but the latter is thicker and fully as productive in the center of the field as the former. At least two wells have missed the intermediate zone entirely, only to develop a fair production in the Buckbee sand. Both zones have shortcomings, in that the Buckbee is not uniform and shows bottom water, while the intermediate sand seems concentrated near the center of the field.

A comparison of the wells completed in the intermediate zone with an equal number in the Buckbee sand shows a much greater average decline in the latter. It may not be fair to make such a comparison, since the latter has yielded so many more wells than the former, and consequently has a correspondingly greater number of pressure outlets. This unfavorable factor probably would be offset by the greater thickness of the intermediate zone, however.

Just how far the switch to the intermediate zone will go is problematical. When the limits of the sand are well defined, the wells falling outside the line will be carried exclusively to the Buckbee zone. The intermediate sand seems to go rapidly to gray sand where the first water appears along the edge.

3000 Feet of Sand

George F. Getty's Shaffer 18 was the most important completion of the week, not because of its large production but due to the unusual conditions under which it was placed on production. The well was drilled considerably below 6000 feet as a test of the thickness of the Buckbee zone in the heart of the field. Gray sand made its appearance and the hole was plugged back to 5940 feet. The initial production was 4000 barrels of 33 gravity oil, showing a cut of eight per cent. Every possible foot of the Buckbee zone was included in the final test. It was found that under almost ideal circumstances nearly 300 feet of the sand was productive. The high cut may have been caused by a failure to exclude all of the gray sand.

Failure of both the Associated Oil Company and the Richfield Oil Company to find the Buckbee sand in tests in the northwest part of the field reveals a very questionable condition in this area. Associated Oil Company's Clark 2 has been cored below 6350 feet, but the formation continues to run to gray sand. Richfield Oil Company's Elliott 2 is coring gray sand at 6075 feet and below the point at which the Buckbee sand was expected. Both of these wells found the Buckbee shale, and the failure to find the oil sand in place practically eliminates them as probable producers. The Meyer zone was productive in this part of the field.

As a result of the foregoing tests, Shell Company has abandoned the idea of completing Thompson 6 in the Buckbee zone and is now coring for the Meyer sand. Thompson 6 is located only a short distance from both unsuccessful wells. Other wells drilling in this part of the field apparently have little chance of developing commercial production in the Buckbee sand.

After cleaning out and deepening No. 1 about 20 feet, York and Lockhart have again placed the well on production. The new initial was about 1000 barrels, a much smaller yield than was expected. It was found that only six feet of sand was open below the shoe. This well was almost ruined by the Bellview Oil Company's Grohs 2, which flowed wide open for three weeks after blowing out and catching fire.

In sharp contrast to his recent completions, George F. Getty's O'Connell 21 was completed with an initial production of only 1000 barrels from 5800 feet. The oil was 34.8 gravity and clean. This well is located favorably and its action was a keen disappointment.

Associated Oil Company continued its success in the Buckbee zone, with the completion of Dewenter 7, which came in with an initial production of 3000 barrels from 5745 feet. With a cut of 2.4 per cent. this well was not as clean as previous completions.

Wilshire Oil Company, discoverers of the Buckbee zone, completed Koontz 2 with an initial production of 3400 barrels. The depth was not made public, but other wells in this part of the field were completed around 5750 feet.

Graham and Loftus were dissatisfied with the action of Santa Fe Springs 1 and have killed the well for deepening. The oil showed a cut of 41 per cent. and failed to clean up on a test of several days. This well was originally completed in the intermediate zone and seems to define the limits of the formation in this part of the field.

As the number of new wells increases, it becomes more apparent that

the field decline will be rapid. New production during the week totaled 30,000 barrels from 10 wells, yet the field total increased only 17,500 barrels. Two small wells were killed, accounting for 2700 barrels of this decline, however. This leaves a 10,000-barrel decline from 20 wells, or a 500-barrel drop per week per well. It is obvious that it will require much new to oil account for the decline alone. Production will climb much higher, and may even reach the various estimates, but the decline should be rapid, unless the intermediate zone comes to the rescue.

A few of the wells showing a high cut, and the percentage of the cuts are: The Texas Company's Mattern 2-7, 32 per cent.; Shell Company's Slusher 12, 21 per cent.; Universal Consolidated Oil Company's Blanchard 6, five per cent., and General Petroleum Corporation's Santa Fe 189C, five per cent. Belleview Oil Company's Grohs 2 has completely cleaned up.

Production from the deep zone has increased to 83,500 barrels from 29 wells, the average production per barrel being 2900 barrels. The upper zone is producing 27,000 barrels, giving the field a total of 110,500 barrels. Drilling wells total 236, with 18 active locations. Nine wells are coring in the intermediate zone, six are cemented over the intermediate zone, five are coring the Buckbee shale and 10 are cemented over the Buckbee zone.

Ventura Completion Under Average

Ventura, Calif. — Completed with an initial production of only 1000 barrels, Associated Oil Company's V. L. W. 5 fell considerably below expectations and somewhat under the average initial production of wells finished in the Ventura field. Accompanying the oil was a flow of 60 barrels of water. Gas production fell slightly under one million cubic feet. The well was completed at 7080 feet.

Doheny and Doheny have tentatively located a wildcat north of the present producing limits of the field, to be drilled on the theory that an extension similar to the one recently found south of the field is possible. The well will be located a short distance north of the Magenheimer and Hartman leases.

Semitropic

Bakersfield, Calif.—Richfield Oil Company has been forced to suspend drilling operations in Kerwin 1, a wildcat test in the Semitropic district, due to the condition of the hole and an increasing gas pressure. The well was drilled to 4790 feet before the caving formation forced the suspension. A string of casing will be run and the hole cleaned out to bottom, preliminary to another production test. This well was tested several weeks ago, but failed to make a commercial well.

Kettleman Hills Tests Are Widely Scattered

Coalinga, Calif.—With a dozen new locations and fully as many more expected before the end of the year, Kettleman Hills is beginning to assume the appearance of a real oil field. The district is so large and so little is known concerning the trend of production that the new rigs are widely scattered. The Milham Exploration Company's discovery well is located on Section 2-22-17 but may not prove to be on the apex of the structure. The district is about 15 miles in length and fully six miles wide, although there is little likelihood that such an area will prove uniformly productive. The structure is one of the largest in the state, judging from surface indications.

The major operators have agreed to develop the field in a very conservative manner, limiting the number of wells to 32 on each section. The wells will be located 660 feet apart around the edge of each section, but not closer than 330 feet from the section line. In this manner, neighboring offsets will also be 660 feet apart.

The Marland Oil Company is the newest entry into the field, having located one well on Section 12-22-17 and another on Section 2-22-17. The latter is only a short distance from the discovery well.

Standard Oil Company has also announced another location, the newest test to be drilled on Section 3-22-17. The company is rigging up its first locations announced last week.

Other operators that are expected to start actual drilling operations or have already got under way include Bolsa Chica Oil Corporation, General Petroleum Corporation, George F. Getty, Inc., E. J. Miley Oil Company, Milham Exploration Company, Ohio Oil Company and Associated Oil Company.

Late Elwood Well Settles Down to 4800 Barrels

Santa Barbara, Calif.—Luton-Bell 3, the latest completion in the Elwood field, has settled to 4800 barrels, giving Rio Grande Oil Company and Barnsdall Oil Company four large wells out of five attempts. Luton-Bell 3 is showing only a small decline, with the gravity of the oil running above 38 degrees and the cut standing at only one-tenth of one per cent. Gas production has climbed to one and one-half million cubic feet. Doty 2 will be the next completion, a check of the log showing it to be located favorably on the structure. Elwood Community 1 is showing little more promise at 4600 feet than at 4300 feet, the formation running to hard sand and shale. This outpost well failed to yield commercial production in the zone which is producing in the proven part of the field and seems to be off structure.

The major companies seem content to pay handsomely for leases which probably will be in the edge of the field at the very best. Acreage lying on the flank of the structure is not being sold at any price.

Streaks of shale encountered by Bankline Oil Company in A. and D. 1 attracted considerable attention but proved to be of little significance. The well has reached a depth of 4500 feet, with the formation running to hard shale and shell.

Field production is now a little less than 15,000 barrels from four wells. Nearly all oil is being marketed.

Round Mountain

Bakersfield, Calif.—With completion of Jewett 4, Section 29-28-29, Shell Company has given the Round Mountain field its first production in several weeks. The well was drilled to 1750 feet and came in with an initial production of 375 barrels. Discovery of the Round Mountain field a year and a half ago promised to cause an extensive drilling campaign, but the acquisition of the principal leases by two major companies resulted in a virtual shutdown. Honolulu Consolidated Oil Company and Shell Company obtained the bulk of the leases from the Elbe Oil Company and immediately started several wells. After proving several of the leases, many of the drilling wells were shut down, pending better conditions in the black oil market.

Mt. Poso

Bakersfield, Calif.—While regarded as an important discovery, the area opened up two miles north of Mt. Poso by Bruce Frame will not be extensively drilled while the over-production of heavy oil continues. The discovery well—Dominion 2—has settled to 200 barrels, having started at a much higher rate. The oil is only 15 gravity and shows a cut of 12 per cent. Although similar to several other small structures discovered along the east side of the San Joaquin Valley, the new field is the farthest north of the veritable cluster of structures found along the upthrow of a high fault running through the district. Round Mountain, Mt. Poso, the Lytle Fault and the Lindsay Dome are similar structures.

Potrero

Los Angeles.—The Associated Oil Company will drill another well in the Potrero field early in January, the test to be located at some point on the holdings of the Potrero Country Club. The new location will be northwest of present production. The company is ready to test Pacific-Southwest 1, which was drilled to 5915 feet and plugged back to 5200 feet.

Long Beach

Los Angeles.—A half dozen new wells in the Long Beach field failed to check the decline of the area during the week, giving further evidence that production is slowly headed downward. More than 150 wells are drilling, but the natural decline will easily offset the new production from week to week, except during periods of numerous completions.

Bids Asked for Royalty Oil From Naval Reserves

Washington, D. C. — Bids for the purchase from the government of royalty crude oil from Naval Reserves Nos. 1 and 2, California, will be opened by the Inspector of Naval Petroleum Reserves, Los Angeles, January 12, it has been announced by the Navy Department.

While the quantity of oil to be covered by the contract can not be specified, production for October, 1928, gave the government about 112,000 barrels of royalty oil from Reserve No. 1 and about 62,800 barrels from Reserve No. 2. The contract will cover the period from February 14, 1929, to February 14, 1931, but is to continue thereafter until 30 days after the government or the contractor have announced their intentions of terminating the contract.

Christmas Jinks

Los Angeles.—The third annual Christmas Jinks of the Chamber of Mines and Oil was held at noon, Friday, December 21, in the Sala D'Oro of the Biltmore Hotel, with more than 700 oil men from all branches of the industry in attendance. The feature of the meeting was the presentation of a burlesque play on conservation in the Santa Fe Springs field. Representatives from all of the leading companies met at the "urgent" request of Governor Young and attempted to formulate plans for conserving the waste gas. Among the companies represented were the Stranded Oil Company, the Poorfield Oil Company, the Assassinated Oil Company, the Smell Oil Company, the Inferior Oil Company, the Mattress Oil Company, the Makemillions Oil Company, the Dago Oil Company, Flair and Company and Organ and Company, the last two named representing important New York banking firms. One by one, the representatives left the conference, chiefly because of urgent requests of their brokers to watch their oil investments more closely. The whole affair finally broke up with nothing accomplished.

Hard Luck Follows Deep Test at Rincon

Ventura, Calif.—Hard luck continues to camp on the trail of the Richfield Oil Company, preventing any and all efforts to complete Hobson 1, an important deep test in the Rincon field. On the latest test, the well showed a high percentage of water, even after the hole had been plugged back to eliminate what was thought to be bottom water. A combination string of 4¾-inch casing will be run to 6518 feet and re-cemented through perforations at 6435 feet. Streaks of gray or water sand have been found in different oil zones in the field and it is possible that a similar formation is causing the trouble in Hobson 1. Richfield Oil Company has worked for almost six months on this well, during which time the hole was re-drilled from 5800 feet and several difficult fishing jobs overcome. The company's Hobson Fee 1 is drilling at 5750 feet and promises to throw additional light on the possibilities of the deep sand. Development in the field is at a very low ebb, with little likelihood of increased activity.

Suspend Operations

Taft, Calif.—Absence of a satisfactory producing formation in the Republic Petroleum Company's No. 32, Section 8-32-23, has prompted a suspension of drilling activities at 4435 feet. The well will be tested at the present depth and perhaps at at least one other level above before being abandoned. Just why this test did not encounter the formation which was so productive in other wells nearby remains a mystery. A test around 3600 feet failed to develop commercial production. The neighboring wells are producing from a sand found between 2600 and 3000 feet.

Union Oil Company has passed 2550 feet in Western Petroleum 1, Section 27-32-23, a test of the deep sand about three miles southeast of Republic Petroleum Company's discovery well, but has not found the formation expected around 2500 feet. Cores are being taken at regular intervals, but have revealed only small oil and gas showings.

Production Added at Seal Beach by Standard

Los Angeles, Calif. — Standard Oil Company of California added 1250 barrels to the settled production of the Seal Beach field, with the completion of San Gabriel 17 at 4970 feet. The oil was 27.5 gravity and showed a cut of two per cent. The well is located in the conservatively developed area, which is controlled by the Standard Oil Company, Marland Oil Company and Associated Oil Company and has been drilled at in a leisurely way while the Alamitos Heights or townlot sector was being developed in only a few months. San Gabriel 17 is a representative producer in this part of the field and offers a sharp contrast to the small wells in the intensely developed area.

Marland Oil Company, probably the largest producer in the townlot district, has not discarded the idea that better production is possible below 6000 feet and is deepening three wells on the theory. The company has completed a few wells in this extremely deep sand but none has justified the expense involved in deepening more than 1500 feet.

Hawthorne

Los Angeles.—A much warmer reception has been accorded the Hawthorne field than at any time in the past, due to the unexpected action of the Smith Petroleum Company's Berry 1, which came in with an initial production of 1100 barrels and increased its yield to 1400 barrels within a week. The latest producer, and incidentally the second well completed in the field, has all the earmarks of a consistent producer and has forced some of the pessimistically inclined to list the area among the proven fields. The discovery well was very small, producing only 150 barrels on the initial test. For this reason, some of the major companies did not change their opinions on the district.

Leasing is more active than at any time in the past, desirable acreage commanding fancy prices. While regarded as a townlot proposition, there is little likelihood that the field will be intensively developed for some time.

San Luis Obispo, Calif.—Several of the many wildcat wells started in San Luis Obispo County following the discovery a year ago of a new field south of Edna have been shut down for various reasons. Crude produced in this part of the state is heavy and the wells usually are small.

Fruitvale

Bakersfield, Calif.—The accessibility of the Fruitvale field and the ease with which the oil may be marketed are expected to play an important hand in the development of the field when conditions in the heavy oil market show an improvement. Located just outside the city of Bakersfield and only a short distance from refineries, pipe lines and ample storage, the area probably will be the center of an active development campaign within the next two years. A satisfactory water and power supply makes the development of the area much more attractive than some of the more doubtful structures located in the rough sections to the north and east.

Pacific Eastern Production Company has three wells near completion in the field, with several others drilling over a wide area.

Los Angeles.—The annual balloting for the officers and directors of the Chamber of Mines and Oil for the coming year showed the election of the following: President, R. A. Broomfield; vice-presidents, Theodore Martin and C. E. Olmstead; directors, J. C. Axelson, J. A. Brown, Chester W. Brown, J. A. Crawford, Earle Derby, David S. Ewing, D. S. Faulkner, E. B. Gilmore, H. P. Grimm, Edwin Higgins, C. S. Jones, F. R. Kenney, M. E. Lombardi, Alexander B. Macbeth, A. C. Mattei, Herbert R. Macmillan, John McKeon, A. C. McLaughlin, E. J. Miley, H. L. Payne, William Reinhardt, F. C. Ripley, Robert Schurman, A. L. Weil, S. A. Guiberson and E. M. Smith.

Buttonwillow

Bakersfield, Calif.—The Buttonwillow district still remains in the doubtful class, although a large gas production has been developed during the past two years. Milham Exploration Company, subsidiary of the Mexican Seaboard Oil Company, was the pioneer in the area, but several other companies have become sufficiently interested to drill wildcat tests. The Southern California Gas Company has one well shut down at 4275 feet and two idle locations, but has made no recent announcement concerning its immediate plans. Doheny-Stone Drilling Corporation has cemented a string of 8⅝-inch casing at 4630 feet in Salisbury 1, which should be the next completion.

Gulf Coast Field Development Notes

Big Well At High Island Runs Wild

Houston.—The new deep sand well of Marrs McLean at High Island, Cade 12, which caught fire on December 10, about a week after it was brought in, was finally put under control December 18, and is now making 1200 barrels a day, pinched in, at a depth of 4363 feet. The oil is 33.06 gravity.

The well opens up a new producing horizon, is the biggest ever completed at High Island, and is estimated by Mr. McLean to have produced at the rate of 10,000 to 15,000 barrels a day while it was on fire.

Immediately after the well came in, it was choked down through a one-half-inch and was estimated to be making 1500 barrels a day, but a gauge showed that it was actually doing around 3700 barrels. Two 3/16-inch chokes were put on and the flow held down to 800 barrels, and then two one-fourth-inch chokes were used and the well produced for eight days with 485 pounds pressure showing.

It caught fire on the eighth day, and some drill stem, stacked in the derrick, fell and broke the christmas tree, and the well began running wild, through an eight-inch connection.

"I believe that the well was making anywhere between 10,000 and 15,000 barrels at the time it was running wild and burning," Mr. McLean said.

Cade 12 at High Island

On December 15 an effort was made to extinguish the fire, with eight boilers. Thirty thousand pounds of foam powder were used but the fire was not affected. On Tuesday The Texas Company sent its Foamite train from Port Arthur, and the Santa Fe assisted with two locomotives which were connected with the scene of the fire by steam lines. Ten boilers at the fire were brought into play and within 12 minutes after the stream of Foamite and steam began playing on the fire the flames were extinguished, only to break out a moment later. The flames were again extinguished and finally a gate valve was put on the connections which were badly burned. Due to the presence of part of the drill stem on the hole it was considered too dangerous to attempt to pinch the well in to any great degree and it is estimated to have made around 4500 barrels a day until Saturday, December 22, when better connections were made. At that time the well was reported to be making around 1200 barrels a day pinched in, with a 200 barrel leak at the connections.

Mars McLean, whose headquarters are in Beaumont, has been a pioneer operator at High Island, and holds 1300 to 1400 acres of land under lease there.

East Hackberry

Houston.—In the East Hackberry field, Cameron Parish, Louisiana, the Calcasieu Oil Company and its associates, Magnolia Petroleum Company and Union Sulphur Company, have completed Watkins 12 as a fairly good well. It came in on December 22 for 1200 barrels initial production; and the middle of this week had settled to 900 barrels per day, making pipe line oil. This well is in the western part of the field, west of the highway bridge across Kelso Bayou. Casing is set in this well at 3960 feet.

On Wednesday of this week Calcasieu Oil Company was also drilling in two other tests in the East Hackberry field, Breaux 1, and Valery 5. Breaux 1 is an interesting test in that it is the most easterly in the field, outside of the Louisiana Land & Exploration Company's Calcasieu Lake B-3, the new well in Calcasieu Lake, which extended the field over one-half mile to the east.

Breaux 1 is about 1000 feet west of the Louisiana Land & Exploration Company well, being just on the shore of the lake. Breaux 1 is 4206 feet deep, and casing is set above a sandy shale showing oil at 4195-4205 feet.

Valery 5, which is also expected to be a producer within a short time, is 3868 feet deep, and casing was set above a sand showing oil. The test is a short distance east of the Valery 3, one of the best producers so far completed in this field.

Gonzales County Wildcat Makes 500 Barrels

Houston.—Empire Gas & Fuel Company's Norwood 1, discovery well of a new producing area in northern Gonzales County, is expected to produce around 500 barrels per day when it is put on the pump. Early this week work of rigging up a standard rig was in progress.

The company has put up four 500-barrel tanks, and the latter part of last week around 1300 barrels had been run into the tanks, with the well flowing by heads.

Plans have not yet been made definitely for a pipe line connection, but the owner was negotiating last week with Magnolia Pipe Line Company for construction of a line. The wildcat producer is about six miles from Luling, and is even closer to the nearest pipe line system. On December 20 the Magnolia Pipe Line Company tested the oil from the new Gonzales County well, and it registered 32.0 gravity, corrected.

Following completion of the Empire Gas & Fuel Company's well, Cranfill & Reynolds have made location for Webb 1, offsetting the discovery well to the southeast; and have already erected a derrick.

The production of the new well is from 25 feet of sand and shale in the base of a stratum of Taylor marl. The bottom of the hole is at 3779 feet. Casing is set above the Taylor marl, and the open hole below the casing includes 55 feet of the Taylor marl, and seven feet of Austin chalk; with the sand and shale from which the oil is coming in the lower part of the marl.

The well is only 150 feet from the Gonzales-Luling highway. The surrounding country is hilly and covered with oak trees. The location of the well was particularly advantageous in several respects. It was close to the highway and facilitated transportation of supplies, and the San Marcos River is only one mile away, and furnished water; while a natural gas line runs within 300 feet of the well, and furnished fuel for drilling.

Houston.—The average daily production at Raccoon Bend, Austin County, is now around 1200 barrels, with three wells of the Humble Oil & Refining Company and the Valley Oil Corporation contributing to that output. The three producers, which are around 3200 feet deep, are: the Grawunder B-1, latest well completed; Bracey A-1; and Gotosky 3. The present productive area embraces a strip over a mile long.

During the past week the above named interests, operating jointly, and incidentally the only operators in the field, abandoned their Hardy 1 at 1224 feet after testing fresh water. Hardy 1 is 3900 feet northeast of Bracey A-1, the most northerly producer in the field.

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Two Producers Added in Cedar Creek Field

Houston.—Two new producers have been completed in the Cedar Creek field, southwestern Bastrop County, during the past week. Atlantic Oil Producing Company completed Yost 1 for approximately 300 barrels from the serpentine at a total depth of 1341 feet; and Cranfill & Reynolds brought in Yost 3, swabbing around 50 barrels per day from serpentine at 1394-1418 feet.

Following these completions, there are now four producing wells in the Cedar Creek field, the other two being Cranfill & Reynolds' Yost 1 and Yost 2. Yost 1 was the discovery well.

Amerada Petroleum Corporation is reported to have abandoned its Yost 1 in this field, having failed to obtain production in the serpentine which it encountered. The well tested salt water at 1767 feet.

Salt Flat

Houston.—During the past week several producers were completed in the Salt Flat field, just outside of Luling, Caldwell County; and on Friday, December 21, the field had reached a new high level of 8957 barrels production for the day; that amount coming from 25 producers, and not including the output of several small wells producing from the Austin chalk.

The status of drilling operations at that time was as follows: 43 tests drilling and rigging up; 21 derricks and locations.

Completions during the past week include Cranfill & Reynolds' Smith 1, completed for 636 barrels in the Edwards lime at 2680-2685 feet; Gulf Production Company's Connally 2, a 500-barrel well in the Edwards at 2717-2743 feet, Connally 3, good for 900 barrels in the Edwards at 2686-2705 feet, and Connally 4, which swabbed 72 barrels in the first hour and a half from Edwards lime at 2682-2704 feet.

Sulphur Dome

Houston.—Union Sulphur Company, fee owner and sole operator of the Sulphur field, Calcasieu Parish, Louisiana, boosted that dome's output last week through completion of Fee 731, which came in for 1680 barrels initial production, flowing pipe line oil of 23.7 gravity, through a three-quarter-inch choke.

During the week ending December 22, the average daily production of the Sulphur field was 3800 barrels, according to estimates of the American Petroleum Institute.

Humble Resumes Drilling at South Dayton

Houston.—Humble Oil & Refining Company, which resumed activity some time ago at South Dayton on the South Liberty-Dayton dome in Liberty County, on that edge of the dome lying across the river from the South Liberty field, has made a producer of Welder 9 there. Screen was set in this test at a total depth of 3628 feet; and swabbing, the well has been making 100 barrels per day. It will be put on the pump.

The South Dayton field, located on the west side of the South Liberty-Dayton dome, was opened for production early in 1926 by Humble Oil & Refining Company; but the area has been inactive for a long time, due to excessive salt water and weak gas pressure. Gulf Production Company has also done some drilling here in the past.

Gulf Companies to Occupy New Building

Houston.—The South's largest building, located at Main Street and Rusk Avenue, Houston, which will be completed early in 1929 by the Jesse H. Jones Company, has been named the Gulf Building. Gulf Production Company, Gulf Pipe Line Company and Gulf Refining Company will occupy 12 floors, eight to 19, inclusive, immediately on completion, and has taken an option on two additional floors, giving this concern 14 of the 37 floors in this combination bank and office structure.

The accompanying illustration, the architect's drawing, shows Houston's newest and most imposing structure, which tops the city's rapidly growing sky-line. It is 440 feet in height with the first six floors build of Indiana Bedford stone and the remainder of buff faced brick.

New Gulf Building at Houston.

The new Gulf Building will house a number of other oil concerns and individual operators, names of which will be announced January 1.

Alfred C. Finn of Houston is architect for the Gulf Building and J. E. R. Carpenter and Kenneth Franzhein, both of New York, are the associate architects.

Continental Takes Over Colorado Properties

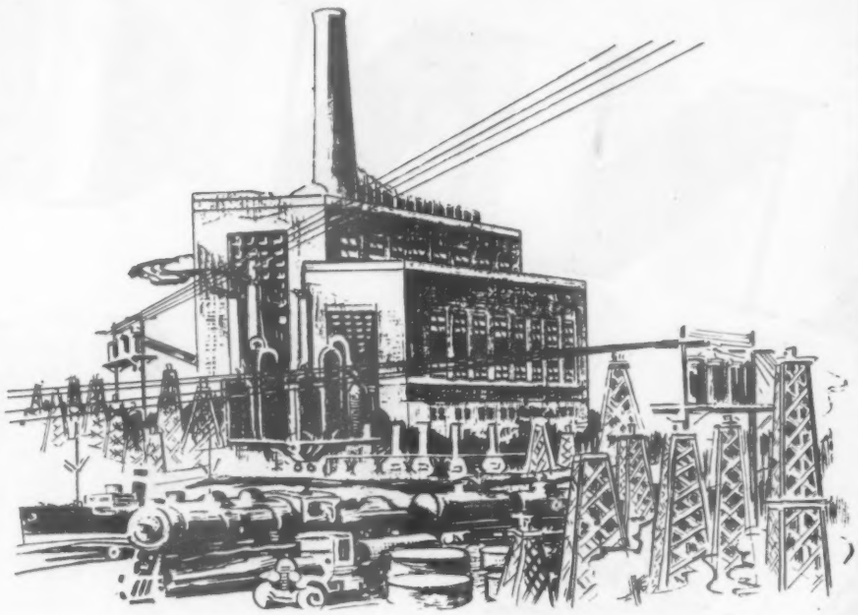
Denver, Colo.—Holdings of the Union Oil Company of California in Wyoming and Colorado were taken over last week by the Continental Oil Company. Properties include leases and producing wells in the Wellington and Fort Collins fields in Northern Colorado, producing wells in the Maverick Springs field and Fremont County, the Sunshine structure operations in Park County, and the Mandel structure in Albany County, in Wyoming. The acreage in Northern Colorado amounts to 11,728 acres with a production last year of 1,200,000 barrels; production had been handled by the Continental Oil Company at the Florence, Colorado, refinery. The total value of all properties is estimated to be worth about $5,000,000. Consideration is said to have been part cash and an exchange of the Sulphur Mountain properties of the Continental Oil Company in California. The trade will give Continental Oil Company more production of its own for its Rocky Mountain refineries, and will also provide undeveloped properties for exploration purposes.

Bureau of Mines Gets Appropriation

Washington, D. C.—An increase of $23,520 is given the Bureau of Mines of the Department of Commerce in the appropriation bill for the fiscal year beginning July 1, next, just submitted to congress, for the development of methods for the utilization of natural gas. In recommending the increase, the appropriations committee pointed out that the utilization of gas, which is now wasted in large quantities in many oil fields, is of great economic importance and is also of special interest to the government at this time in connection with the disposal of residue gas from the government helium plant now nearing completion at Amarillo, Texas.

Reductions Made in Texas Rates on Crude Oil

Houston.—Copies of schedules filed with the Interestate Commerce Commission, by A. C. Fonda, agent, on behalf of the rail carriers, have been received in which quite a number of reductions in crude oil rates for export and coastwise movement to destinations in the United States effective on December 20. The reductions vary from one to six cents per one hundred pounds and apply from points on various lines in Texas and Louisiana.



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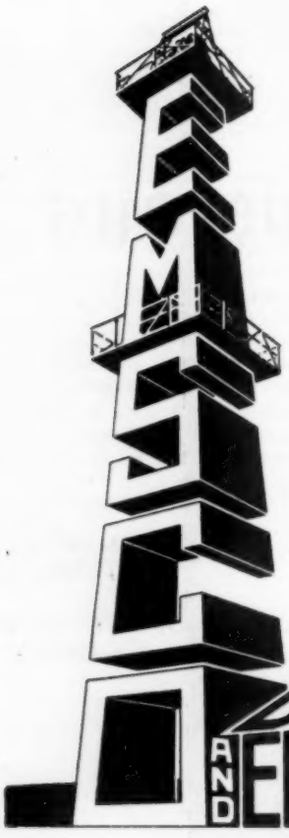

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PERSONAL MENTION-MEN YOU KNOW

J. A. Bermingham, formerly assistant division manager of The Texas Company at Fort Worth, has been made general superintendent of The Texas Production Company in the Rocky Mountain region and will henceforth have headquarters in Denver. Mr. Bermingham is a vice-president of the company.

A. B. Patterson, who has been general superintendent of operations of the Texas Production Company in the Rocy Mountain region, has been transferred to Lake Charles, La., where he will have charge of several tests to be drilled by the company in that district.

J. J. Flanagan, who has been general superintendent of the northern division of the Continental Oil Company in Rocky Mountain states, will be transferred to California where he will hold a similar position with the company.

Irvin H. La Plante, field superintendent for Marland Production Company in the Howard-Glascock County district, died December 17 at Big Spring, Texas, after a short illness. The body was forwarded to Breckenridge, Texas for burial.

George Murphy, 37 years, who has had charge of tank car shipments of crude from the Pyote, Texas, rack of the American Petroleum Company for the past year, was fatally injured in an auto collision December 13, between Van Horn and Sierra Blanca, Texas. The body was shipped to his home at Denison, Texas, for burial.

J. E. McDonald has resigned as sales manager of The Edward Valve and Manufacturing Company to become vice-president of the B. Floersheim Company, Inc., piping engineers and contractors of Pittsburgh, Pennsylvania, effective January 1, 1929.

John M. McGinley, vice president of Marland Production Company and head of the land department at Ponca City, Oklahoma, is the latest of the Marland officials to resign. McGinley prior to his removal to Ponca City was in charge of the Marland Production Company's land office in Tulsa. He is expected to continue in the oil business.

San Angelo, Texas. — The annual West Texas Oil Exposition, which is sponsored by the Board of City Development and local oil men, will be held Thursday and Friday, January 24 and 25, according to Robert Carr, chairman. An elaborate entertainment program is being arranged for visiting oil men.

John H. Nelson, international authority on oil, has resigned his position with the United States Department of Commerce, where for the past three years he has been in charge of the foreign petroleum work; his resignation having been made in order to become Eastern representative of the Gulf States Terminal and Transport Company, with offices at 15 Moore Street, New York City. He will have charge of the Company's foreign trade, which extends to several nations, together with its Eastern coastwise business now reaching approximately two cargoes monthly. Mr. Nelson recently recommended Tulsa as a branch office of the Department of Commerce, final approval of which was given during the past week.

Brooks Gutelius has been promoted to a vice-presidency in the Continental Supply Company and will make his headquarters in St. Louis. Mr. Gutelius has been manager of the Mid-Continent district for Continental Supply Company for several years, having headquarters in Tulsa. He is a director of the International Petroleum Exposition. C. J. Holloran, who has been assistant manager in the Tulsa office, will become manager of the district.

R. D. Oberwetter, general manager of the Reading Iron Company of Texas, is in Reading, Pennsylvania, attending the annual sales meeting and conference of the Reading Iron Company.

Clyde A. Thorpe, a veteran scout in the Texas and Louisiana Gulf Coast area for the past 15 years, is having to give up his position as South Louisiana scout for The Texas Company because of his health. He has been with The Texas Company for approximately 10 years.

Phillip Maverick, consulting geologist of San Angelo, Texas, returned to his headquarters early last week from Gonzales County, where he had been looking over the properties of Empire Gas & Fuel Company which recently got the Norwood 1, a discovery wildcat. Mr. Maverick made location for this wildcat test after working out the geology on the George C. Sullivan block on which the well is producing. This discovery is reported good for 500 barrels on the pump and is producing from sandy shale at the bottom of the Taylor marl. Mr. Maverick, assisted by Henry Conkling of San Angelo, worked the block of acreage with the magnetometer.

E. S. Browning, formerly district manager in the Mid-Continent and Texas territory for Hill, Hubbell & Company, headquarters at Tulsa, has been made vice-president in charge of the Eastern Division. David M. Boylan, former assistant district manager at Tulsa, has been named to succeed Mr. Browning. These changes follow by about a month the death of R. H. Hubbell, president of the company, and vice-president of the General Paint Corporation, which was recently formed through the merging of Hill, Hubbell & Company with eight other Pacific Coast paint manufacturers.

A. G. Evans-Lombe, formerly superintendent for the Moody Corporation in the Central West Texas district, has been appointed superintendent of production and drilling for the Superior Oil Producing Company, subsidiary of the Superior Oil Corporation, Tulsa, and is making his headquarters at Cisco, Texas. Superior Oil Corporation is one of the leading producers in the Roberts-Chalk field, Howard County, and J. W. Redford is field foreman in this area with headquarters at Big Spring, Texas.

A. G. Chamberlain, of the purchasing department of the Frick-Reid Supply Corporation, has been transferred to the position of director of advertising. This is a newly created division in the organization and is further evidence of the growth and expansion of the company.

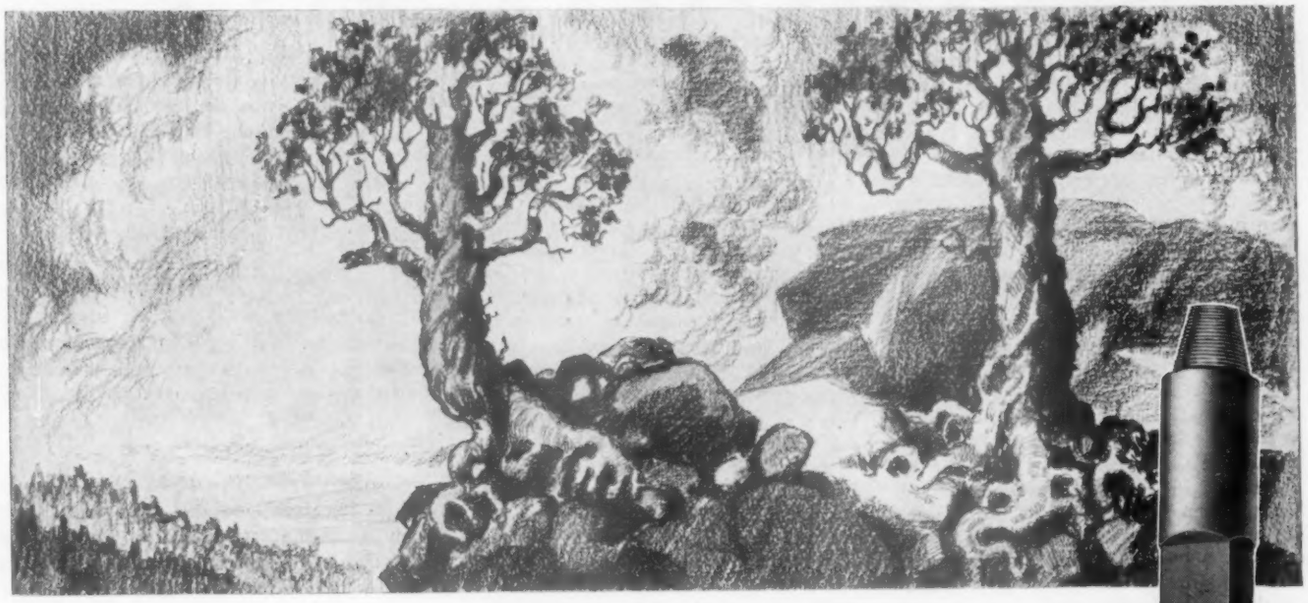
Walter Spielberger, formerly secretary-treasurer of the Mid-Continent Employees Royalty Company, Tulsa, has severed his connection with that organization. He will deal in producing royalties and petroleum properties. He has taken new offices on the fourteenth floor of the Hunt Building, Tulsa.

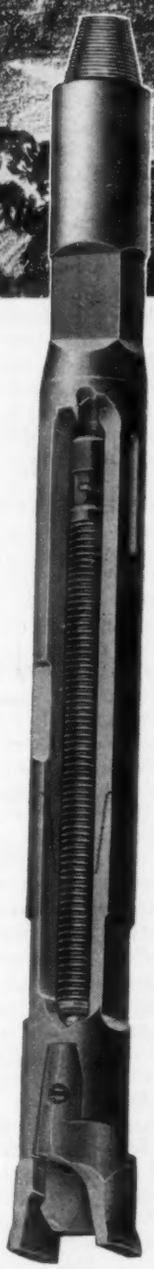
J. H. ("Red") Lewis, scout for The Texas Company of California, has returned from El Paso, Texas, where he spent some time on a business trip.

Shelley Mullen, a member of the Humble Oil & Refining land and scouting department for four years in the Gulf Coast territory, is now field salesman for Standard Supply & Hardware Company, New Orleans, covering principally the southeastern part of Louisiana. John M. Kinabrew, a vice-president of the company, is in charge of the oil well supply branch.

P. A. Guiles who has been connected with the American Tank Company at Oklahoma City, for the last eight years now is associated with the Star Manufacturing Company there.

YOU CAN'T PULL THEM OUT





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BETTER BE SAFE THAN SORRY

Former Bureau of Mines Men Organize Alumni Association

TWENTY-ONE "graduates" of the Bureau of Mines met at breakfast in Chicago and organized the Alumni Association of the Petroleum Division of the Bureau of Mines. Those present were in attendance at the annual meeting of the American Petroleum Institute and came from all sections of the country. Two men who are now in the Petroleum Division attended the meeting, H. C. Fowler, acting chief petroleum engineer of the bureau and E. L. Rawlins, associate natural gas engineer of the Bartlesville station. Three other men who were formerly engaged upon oil and gas work for the bureau, V. R. Garfias, R. R. Matthews, and T. E. Swigart were in Chicago at the time but were unable to attend the meeting.

Included in the gathering were four of the six men who have held the position of chief petroleum engineer of the bureau and Dr. Van H. Manning a former director. Although Dr. Manning was head of the entire bureau and directed work covering all phases of the mineral industry, he has been connected with the petroleum industry since leaving the bureau and for that reason it was decided unanimously that he should become a member of the alumni association of the petroleum division.

The purpose of the organization is to maintain closer contact between the men who were formerly members of the petroleum division than has been possible in the past. It is also believed that through an organization of this kind it will be possible for the "graduates" to keep in closer touch with the work upon which the bureau is now engaged. Most of the men who have left the petroleum division are now engaged on similar work with oil companies and are in a position to render service to the bureau by suggesting problems that should be studied and by recommending men for work with the bureau who will maintain the high standards of the past. No formal organization is planned but meetings will be held from time to time at the large representative gatherings of the petroleum industry.

The alumni association is open to everyone who was formerly employed by the Bureau of Mines on oil and gas works. The attendance at the meeting represented only a small percentage of those who have left the petroleum division in order to accept positions in the industry. A complete list of the "graduates" is being prepared and all those eligible will be invited to join the new organization.

The following attended the first meeting of the alumni association:

A. W. Ambrose, Empire Companies, Bartlesville; Max W. Ball, Consulting Engineer, Denver; C. E. Beecher, Empire Companies, Bartlesville; H. W. Bell, Pure Oil Company, Chicago; E. O. Bennett, Marland Oil Company, Ponca City; E. P. Campbell, Marland Oil Company, Breckenridge, Texas; R. E. Collom, Marland Oil Company, Los Angeles; Harry C. Fowler, U. S. Bureau of Mines, Washington; Harry H. Hill, Standard Oil Company of New Jersey, New York; R. R. Kelly, Pure Oil Company, Fort Worth; M. J. Kirwan, Indian Territory Illuminating Oil Company, Bartlesville; H. J. Lowe, Pure Oil Company, Chicago; Van H. Manning, Petroleum Research Corporation, New York; Chester Naramore, Sinclair Oil Corporation, New York; H. R. Pierce, Dunn & Lewis, Pittsburgh; E. L. Rawlins, U. S. Bureau of Mines, Bartlesville; Walter F. Rittman, Carnegie Institute of Technology, Pittsburgh; K. C. Sclater, Marland Oil Company, Ponca City; W. W. Scott, Humble Oil & Refining Company, Houston; Earl W. Wagy, Standard Oil Company of California, San Francisco; D. P. Wardwell, Wyoming Airways Corporation, Casper; John H. Wiggins, Tulsa; W. A. Williams, Crown Central Petroleum Company, Houston.

Oil Show in Utah Wildcat

Salt Lake City, Utah.—There is an oil showing reported in Krumvieda 1 of the Western Venture Corporation on Section 6-5s-21, seven miles south of the town of Vernal. Total depth is 1270 feet. Contractors report that drilling has been continued cautiously and that the last eight feet have shown to be saturated sand. A water shutoff is to be made of the well, and a test run for production. The well is being drilled in the Tertiary, about one mile gack of the oil sand outcrop, and if it is successful it will prove a very large territory. At the same time it will prove the geological theory that the Vernal monocline, or Asphalt Ridge, as it is known on government maps, is a duplicate of the Kern County fields of California, on a larger scale.

Casper, Wyo.—It was announced here this week that New Mexico has been eliminated from the Rocky Mountain division of the Texas Production Company and that henceforth will be cared for under the Central Texas division of the Texas Company. The Rocky Mountain territory now embraces Colorado, Utah, Wyoming, Montana and Canada.

Casper, Wyo.—Midwest Refining Company will pay an extra dividend of $35 per share in addition to the regular annual dividend of $4 per share, and 680,000 shares of stock, a total of $26,520,000 for distribution. Most of the profits are derived from crude produced in the Salt Creek field. Stock in the company is owned 99½ per cent by the Standard Oil Company of Indiana. The Midwest Refining Company was incorporated in 1914 to take over and extend the operations of the Midwest Oil Company. As then organized the company had an authorized capital of $20,000,000; now its capital is $50,000,000 with a $50 par. Distribution of this large surplus at this time, in view of the pending investigation of Salt Creek titles, is regarded as being most significant.

Great Falls, Mont.—Most interesting development in Kevin-Sunburst for several months was the completion a week ago of the Hannah-Porter Oil Company's State 2, located almost five miles southeast of the nearest producing wells. The well was drilled in two weeks ago and got gas with a spray of crude. The company shut down with the intention of securing more leases in the territory, but last week the well blew its control, injuring the four men who attempted to shut it in again. At present it is believed that the well will produce 300 barrels of high grade oil.

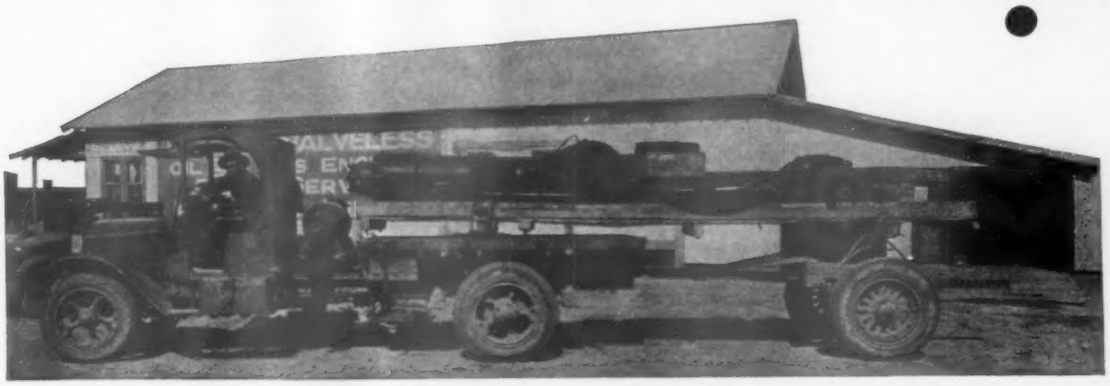
Cody, Wyo.—The Ohio Oil Company does not feel now that its wildcat well on Shoshone structure, three miles east of this town, will amount to as much as it at first promised. The Embar sand was topped at 4752 feet and at 4765 feet the hole has 3500 feet of oil standing. This oil has a very high temperature, and upon drilling to 4780 feet hot water developed in the hole. It quickly filled with the water, and drilling is now to be suspended and an attempt will be made to shut off this water and to plug back to the oil sand. Well is to be pumped, and the future of this field will depend largely on the showing it makes during the test.

Casper, Wyo.—The inspector of No. 3 naval petroleum reserve is asking for bids to lease oil field storage and pumping equipment which formerly belonged to Mammoth Oil Company on Teapot Dome, and which was taken from that company when its contract for operating the structure was cancelled by the government. Bids will be opened in Casper on January 7 at 11 a. m. The properties for lease consist of a pump station at No. 2 camp, more than one mile of eight-inch pipe line, two 55,000-barrel tanks, two 64,000-barrel tanks, and seventeen 80,000-barrel tanks. It is said that there are certain oil companies interested in this equipment and storage provided that they are awarded the contract to purchase the Salt Creek royalty oil which is still unawarded.

Charles A. Dally, Jr., general manager for the last 14 years of the Reserve Natural Gas Company of Louisiana, which recently was merged with the Arkansas Natural Gas and other Doherty companies, will be succeeded on January 1 by W. H. Buckley, former manager of the pipe line department. Mr. Daily will accept the general managership of the Penn-Ohio Gas Company with offices in Pittsburgh, Pennsylvania.

FRANKLIN VALVELESS
OIL AND GAS ENGINES

All Aboard!

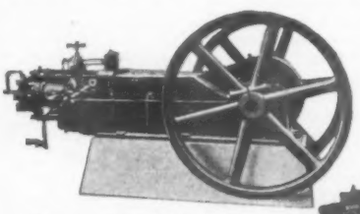


The Entire Franklin Engine is Easily Moved on One Truck Load—

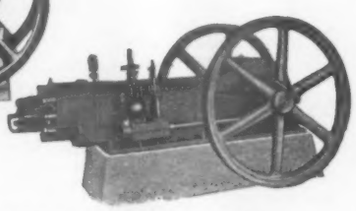
One truck—that's all. And no overloading or straining of the truck.
The Franklin Engines are not bulky. Good material and scientific design give the Franklin Engine greater strength without useless weightiness.
And loading the Franklin is as quick and efficient as a military movement. The few parts necessary to remove for loading come off easily, and are quickly assembled after unloading.

Yet, the best part of the Franklin is that you've got something when you get it set up. The Franklin Oil Drilling Engine has a fine record of performance. They show power, speed and flexibility.

The Franklin pumping engine displays a sturdiness that has gained many friends on the oil field. These pumpers come in 30, 40, 50 and 75 horsepower.



Type OF Oil Drilling Engine

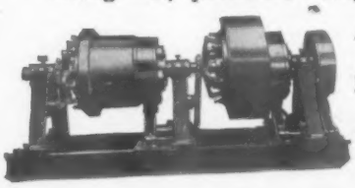


Type AO Oil Pumping Engine

Two speeds in either forward or reverse—all bearings enclosed —run in oil or grease.

All brake band and clutch discs adjusted without stopping the engine.

All brackets, bell cranks, toggle arms, brake cranks, levers, driving discs, spiders and sliding sleeves made of steel.



All similar parts of clutch interchangeable.

Belt driven — no shaft breakage.

The 2 SD Clutch will pull the largest bailer wthout faltering.

Type BG for Cable Tool Drilling, etc.

Here is a clutch that will operate satisfactorily and smoothly for cable tool drilling or for pumping operations. The BG type has one speed forward and reverse. It is much the same construction as the 2 SD clutch.

THE FRANKLIN VALVELESS ENGINE COMPANY
Franklin, Penna.

Distributed by

OIL WELL SUPPLY COMPANY

Branches in All Oil Fields

United States Daily Average Production

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision:

1928	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Ave.	United States Total
January	675,450	108,300	523,300	125,450	45,250	90,050	109,600	77,000	617,100	2,371,500	73,516,500
February	664,450	110,550	538,750	115,800	45,300	88,250	104,850	75,550	614,750	2,358,250	68,388,850
March	646,850	112,250	575,850	119,900	44,400	85,600	102,150	78,700	617,450	2,383,150	73,877,650
April	620,450	112,150	617,850	118,850	46,900	83,450	107,000	78,500	613,550	2,398,700	71,961,100
May	610,100	108,750	561,450	129,850	43,600	91,250	112,100	82,200	630,900	2,370,200	73,476,300
June	594,850	105,200	554,400	135,400	42,350	102,850	109,300	82,400	643,400	2,370,150	71,104,500
July	587,150	102,750	597,250	133,650	42,150	90,700	113.400	80,400	644,700	2,392,150	74,156,600
August	656,350	102,200	604,000	130,200	40,200	87,500	113,300	77,700	634,150	2,445,600	75,534,600
September	724,850	99,750	604,150	129,500	39,050	84,700	112,550	78,850	631,650	2,505,050	75,151,500
October	741,350	97,900	598,550	129,950	38,800	83,550	114,000	83,300	624,450	2,511,850	77,867,800
November	715,750	96,600	586,350	135,100	38,600	83,000	109,700	81,150	653,050	2,499,300	74,978,300
Dec. 1	708,600	97,250	582,950	132,150	38,200	82,100	110,000	78,100	676,800	2,506,150	17,543,050
Dec. 8	705,300	97,950	598,750	132,400	37,750	83,950	112,000	73,150	679,600	2,520,850	17,645,950
Dec. 15	707,050	96,600	601,650	135,400	37,500	81,550	113.500	75,950	697,600	2,546,800	17,827,600
Dec. 22	704,650	96,000	607,050	133,600	37,000	80,000	*113,900	*73,600	*708,800	2,554,800	17,883,600
Increase	.....	.....	5,400	.....	.....	.....	400	.....	11,200	8,000	56,000
Decrease	2,400	600	.....	1,800	500	1,550	.....	2,350	.....	.....	.....

TEXAS

(Outside Gulf Coast)

PANHANDLE DISTRICT

	Dec. 22	Dec. 15
Carson County	5,900	5,500
Gray County	22,500	23,000
Hutchinson County	29,100	28,900
Wheeler County	800	800
Others	3,100	3,000
Total	61,400	61,200

NORTH TEXAS

Archer County	18,850	19,000
Burkburnett	10,000	11,000
Electra	14,150	13,000
Iowa Park-KMA	4,150	3,950
Montague and Cook Cos.	9,900	10,050
Wilbarger	31,950	33,000
Others	600	600
Total	89,600	90,600

WEST CENTRAL TEXAS

Brown County	9,800	9,950
Callahan County	3,600	3,750
Coleman County	3,850	3,950
Eastland-Desdemona	6,800	6,950
Jack County	1,400	1,200
Palo Pinto County	400	400
Shackelford County	10,400	10,250
Stephens County	7,650	8,000
Throckmorton County	800	750
Young County	8,250	8,500
Others	700	700
Total	53,650	54,400

WEST TEXAS

Crane-Upton Counties	52,100	52,100
Crockett County	2,650	2,750
Howard County	36,600	36,600
Jones County	6,300	6,500
Mitchell-Scurry Cos.	2,700	2,650
Pecos County	71,800	71,800
Reagan County	18,100	17,150
Winkler County	153,650	147,800
Others	1,800	1,950
Total	345,700	339,300

EAST CENTRAL TEXAS

Boggy Creek	2,450	2,800
Corsicana-Powell	9,850	9,900
Currie	500	500
Mexia	6,250	6,300
Nigger Creek	700	700
Richland	500	500
Wortham	1,450	1,500
Total	21,700	22,200

SOUTHWEST TEXAS

Dale	900	900
Laredo District	10,000	9,850
Luling	13,450	13,300
Lytton Springs	1,000	1,000
Somerset	700	700
Salt Flat	7,750	7,100
Others	1,200	1,100
Total	35,000	33,950
T'tl Tex (Outside Gulf Coast)	607,050	601,650

TEXAS GULF COAST

Barbers Hill	1,050	950
Batson	1,300	1,300
Big Creek	2,600	2,800
Blue Ridge	5,400	4,500
Boling	2,450	2,900
Damon Mound	950	850
Goose Creek	6,450	6,400
Hull	10,200	10,350
Humble	3,600	3,500
Orange County	3,500	3,200
Pierce Junction	11,000	12,200
Raccoon Bend	1,200	850
Saratoga	950	950
Scur Lake	3,000	3,000
South Liberty	6,050	6,300
Spindle Top	36,550	37,450
West Columbia	7,300	7,400
Sugar Land	4,650	4,750
Others	3,400	2,850
Total	111,600	112,500
Texas Total	718,650	714,150

OKLAHOMA

North Braman	2,550	2,700
South Braman	1,200	1,350
Blackwell	3,000	3,250
Hubbard	2,250	2,250
Thomas	1,000	1,050
Tonkawa	11,600	11,800
Garber	7,000	7,050
Burbank	24,350	25,000
Osage (outside Burbank)	25,900	25,950
Cushing	20,750	19,950
Yale Jennings	7,800	7,650
Davenport	1,700	1,700
Bristow Slick	20,100	20,100
North Okmulgee	14,300	14,350
Lyons Deaner	4,150	4,200
Cromwell	8,250	8,000
Papoose	3,600	4,000
Wewoka	5,300	5,350
Seminole	42,250	41,250
Bowlegs	46,500	47,400
Searight	9,950	10,100
Little River	84,850	87,950
Earlsboro	73,200	75,300
Duncan District	7,500	7,500
Graham	4,650	4,700
Fox	1,500	1,550
Healdton	13,450	13,500
Hewitt	8,900	8,900
Scholem Alechem	14,350	14,350
Pearson	1,800	1,850
St. Louis	120,050	133,950
Allen	28,300	28,700
Maud	17,850	.....
Others	55,750	64,350
Total	704,650	707,050

CALIFORNIA(*)

Santa Fe Springs	97,700	92,500
Long Beach	191,000	190,000
Huntington Beach	51,200	50,200
Torrance	15,500	15,500
Dominguez	10,000	10,000
Rosecrans	6,900	6,800
Inglewood	27,600	27,600
Midway-Sunset	75,400	75,000
Ventura Avenue	52,000	52,000
Seal Beach	30,000	29,500
Others	151,500	148,500
Total	708,800	697,600

KANSAS

Greenwood County	24,300	24,800
Florence-Covert	1,000	1,000
Peabody-Ebling	3,250	3,250
Eldorado-Towanda	12,900	12,900
Augusta-Fox Bush	3,200	3,200
Rainbow Bend	1,200	1,250
Russell	3,700	3,700
Churchill	7,250	7,650
Oxford	6,750	6,650
Others	32,450	32,200
Total	96,000	96,600

NORTH LOUISIANA

	Dec. 22	Dec. 15
Homer	4,050	4,100
Haynesville	5,550	5,550
Caddo Light	9,150	9,100
Caddo Heavy	2,850	3,000
DeSoto-Red River	4,100	4,100
Elm Grove	600	550
Bellevue	900	900
Cotton Valley	3,250	3,650
Urania	6,050	6,050
Pleasant Hill	500	500
Totals North Louisiana	37,000	37,500

LOUISIANA GULF COAST

Bayou Boullion	500	700
East Hackberry	4,900	5,050
Edgerly	1,000	1,000
Evangeline	850	850
Lockport	3,750	3,900
Sorrento	1,200	1,200
Sulphur Dome	3,800	4,000
Sweet Lake	1,200	1,200
Vinton	4,000	4,200
Others	800	800
Total Louisiana Gulf Coast	22,000	22,900
Louisiana Total	59,000	60,400

ARKANSAS

El Dorado	4,950	4,950
Champagnolle	10,900	11,900
Smackover Light	7,100	7,100
Smackover Heavy	52,800	53,350
Stephens	1,050	1,050
Nevada	1,400	1,400
Lisbon	1,700	1,700
Others	100	100
Total	80,000	81,550

MOUNTAIN STATES(*)

WYOMING

Salt Creek	31,200	33,200
Grass Creek	2,350	2,350
Elk Basin	800	800
Big Muddy	2,550	2,550
Lost Soldier	3,650	3,650
Rock River	2,200	2,200
Lance Creek	350	350
Oregon Basin	2,700	3,050
Others	5,750	5,750
Total	51,550	53,900

MONTANA

Cat Creek	1,550	1,550
Sunburst	7,900	7,950
Pondera	1,900	1,800
Others	50	50
Total	11,400	11,350

COLORADO

Moffats (Craig)	1,200	1,200
Fort Collins	2,200	2,100
Florence	1,400	1,300
Others	2,200	2,350
Total	7,000	6,950

NEW MEXICO

Table Mesa	100	100
Artesia	1,100	1,100
Hogback	500	500
Rattlesnake	1,850	1,950
Others	100	100
Total	3,650	3,750
Totals Mountain States	73,600	75,950

EASTERN STATES(*)

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., and N. Y.)	113,900	113,500

PRODUCTION SUMMARY(*)

East of Rockies	1,772,400	1,773,250
Total United States	2,554,800	2,546,800

(*)Official figures not available at press time on California, Rocky Mountain States and Eastern fields. These have been estimated by Oil Weekly and are subject to revision.

V. P. CANNON, PRES. FITZ C. HURD, SEC'Y-TREAS H. R. WAYLAND, VICE-PRES.

GREEN, CANNON & WAYLAND DRILLING CO.

P. O. BOX 1014

SHAWNEE, OKLAHOMA

October 18, 1928

Reed Roller Bit Co.,
Houston, Texas.

Gentlemen: Attention Mr. E. E. Deacon

I thought that perhaps you would be interested in knowing of the assistance your Double 3 Point Reamer gave us in straightening up a crooked hole which we were drilling for T. B. Slick near Seminole, Okla. Our hole had started crooked at fourteen hundred and fifty feet and at twenty-three hundred feet we commenced having twist-offs about every twelve hours.

Thinking that we needed a seat to start from we made one with a rotary shoeat the point our hole started going crooked. From there we used a standard model Reed bit and three Double 3 Point Reed Reamers in tandem. We made about forty feet with the Reed bit and reamers and then, still using the reamers in tandem and discarding the bit, we made one hundred and sixty feet more hole.

Since starting we have never ran back into the first hole, and never had a single fishing job, and at present are making good time below thirty-seven hundred feet.

We are more than pleased with the work done with your tools on this job, and intend using one of your Double 3 Point reamers from top to bottom on our next location.

Yours very truly,

GREEN, CANNON & WAYLAND
DRILLING CO.

Per V. P. Cannon

Kirkuk, Iraq.
Oct. 27, 1928.

Reed Roller Bit Co.,
Houston, Texas.

Gentlemen:

I am enclosing three pictures taken from different sides of the rig of your "Double Reed" as a reamer. Just pulled out of hole after reaming to bottom 932, present bottom.

I find the Reed to drill from 1 to 2 feet an hour at 50 R.P.M. in the Gypsum rock, 14-7/8 hole, to 2000 feet with 6" drill pipe, and find the "Double Reamer" to be quite a success in all size holes as a reaming bit.

A set of cutters are good for 50 to 100 feet of drilling clean hole when there is no iron to bother.

Yours truly

Alex B. Gross (Driller)
c/o T.P.C. Oil Co.
Kirkuk, Iraq.

Some Important Factors in Pumping Wells

The purpose of this paper is to report the consensus of opinion on some important factors in pumping wells as expressed at a meeting of the American Petroleum Institute Mid-Continent committee on production practice. It was released by the Mid-Continent Division of Development and Production Engineering, American Petroleum Institute and read by J. R. McWilliams, Skelly Oil Company, before the division meeting at Tulsa, November 16. In addition to the regular membership of the committee a number of field men with practical experience also entered into the round table discussion of these various factors. Each member of the committee has written a short paper on one of the topics to be discussed. These papers, which are herewith presented, reflect the consensus of opinion of those present, but not necessarily the personal opinion of the writer.

Central Power Pumping

By L. A. OGDEN

FOR wells having a depth of 3500 feet or less, central power pumping has proven very satisfactory. It is the practice of most producers to install power equipment on a lease as soon as it is sufficiently developed to indicate that there will be enough producing wells drilled to justify the necessary investment. The installation of a central power permits a salvage of all the standard equipment except the derrick and thus reduces the capital investment on the lease. Until recently manufacturers have not kept pace with the demand for heavier equipment, but now there are all steel powers on the market with 30-foot band wheels equipped with eccentrics up to 36 inches and capable of carrying a load of 100 horsepower. There are a number of satisfactory winches on the market which can be used for pulling wells and some are designed for cleaning out. Until the last few years ti was not considered practical to pump wells making more than 125 barrels of fluid per day with jacks. At present, however, wells making as much as 475 barrels of fluid, mostly water, are being pumped from central powers. Jacks giving a five-foot stroke with three-inch tubing are being used on these wells.

In installing powers it has been the ordinary practice to locate the power in the most advantageous place and then simply depend upon past experience to determine the size of engine necessary to handle the installation. By taking indicator cards from engines being operated on powers, it has been determined that in a great many cases the installation is overpowered, for instance, it was found that a 50-horsepower engine was carrying a load of approximately 20 horsepower. In other cases it was found that the engines were greatly overloaded. It is believed that it is advisable wherever possible to indicate the horsepower on pumping engines as a means of correcting trouble with the engine. In one case an engine that had been overhauled a number of times by the manufacturers' service man without satisfactory results, was found from a study of the indicator card to be out of time. This trouble being corrected, there has been no further complaint about this engine.

A study of belt records has showed that a large percentage of belt trouble occurs at the clamp. As a means of eliminating this trouble endless belts are now being used to considerable extent. Great care must be taken, in ordering an endless belt, to obtain the correct length otherwise the stretch will be so great that it cannot be taken up by the ordinary type of idler, and the belt will have to be cut. There is on the market at present a so-called "floating idler" which uses a weight instead of a screw to put tension on the belt and which has a total travel of approximately 10 feet. If the belt is properly selected this idler will allow sufficient travel to take care of any stretch to be expected. In a number of cases the ordinary type of idler has been set on sills in a position parallel to the belt. When it has reached the limit of its take-up, the whole idler can be moved bodily towards the band wheel and placed in a second position on the sills so as to give a greater effective take-up. This type of idler is working out quite satisfactorily.

In the case of an electric-driven power, the same result can be accomplished by the use of one of the various types of reduction gears now on the market where the motor is mounted on the gear and the entire assembly travels together, allowing for a take-up of as much as eight or 10 feet. It is believed that the use of the endless belt is justified; first, because the clamp, which is the source *of* most trouble, is eliminated; and second, because of eliminating the twist in the belt between the idler and the band wheel.

Probably the most desirable installation for the gas engine drive is obtained by using a counter shaft since this allows the selection of large diameter pulleys which give better belt service. However, there are a great many powers now in operation with a single belt driving directly from the clutch to the band wheel. It has been found in some cases with heavily loaded powers that better belt performances can be obtained by using small clutch pulleys and running the engine at a greater speed. When the engine is running at a high speed it gives a greater number of power impulses than at a slow speed, but each impulse is lighter and consequently does not damage the belt as much as a smaller number of more powerful impulses. In one instance, where a 24-inch clutch pulley was used, it was found necessary to cut the belt five times in two weeks when the engine was running at low speed. A 20-inch pulley was installed, the engine speeded up to give the same number of revolutions to the band wheel and the belt has been operating satisfactorily for several months without being cut.

It is possible to eliminate hold downs on shackle rod lines to some extent by computing the curve of the catenary and giving the rod line sufficient sag across low spots. Dynamometer tests have been run to determine friction losses in rod lines and it has been found that a considerable saving in power can be made by proper lubrication of the rod line supports. It was found that with a horsepower input to the rod line of 1.88 at the power, there was an output to the jack of 1.39 horsepower or a loss of 26.1 per cent. in 1700 feet of ⅞-inch rod line. This was with the rod line in average field condition. It was found that by carefully greasing the line a saving of 9.8 per cent. of the total input at the power end could be made. In one 24-hour test on a motor driven power,

it was found that the over-all efficiency from the motor through the power to the knock-off posts varied from 43 per cent. to as high as 58 per cent., depending on the load at various times. The input at the motor varied from 24 to 39 horsepower.

Most jacks now being marketed are built so that they can be counterbalanced and this has proven as desirable as counterbalances on the beam pumper. A dynamometer test was run on a rod line which showed that 6.9 per cent. of the power input at the driving end could be saved by counterbalancing.

A series of dynamometer tests on a number of different makes of jacks showed the mechanical efficiency of the jacks to range from 58 to 87 per cent. with an average of 77.8 per cent. These jacks were all tested on the same well under as near the same conditions as possible.

Sucker Rod Stresses and Counterbalancing

By E. H. GRISWOLD

THE loads carried by sucker rods are composed of three distinct components, namely, the static load, the dynamic load and the frictional load. The static load consists of the weight of the rods themselves and the column of fluid lifted. The dynamic load is the load required to accelerate the static load to the required velocity and the frictional load is the resistance to motion caused by frictional effects between plunger, barrel, rods, tubing and in some cases the casing.

The static load may be reduced only by changing the size or location of equipment which is not often permissible. The dynamic and frictional loads cannot be eliminated but may be reduced by improved methods of operation. The dynamic loads and frictional loads often are in excess of 50 per cent. of the static load and are the ones responsible for most rod breaks because of their impact effects. The dynamic loads are directly proportional to the rate of acceleration and may be reduced by avoiding excessive acceleration after reversal from downstroke to upstroke. Loose rig timbers are a common cause of high dynamic loads. The frictional loads may be alleviated by the use of the proper type and fit of pump and special rod couplings and guides although the latter are not free from mechanical troubles. Wells in which the rods do not drop freely and wells which are allowed to pound down cause a compressive or bending strain to be placed on the rods. The direct cause of rod failure is usually fatigue of the metal or defective manufacture, as neither the elastic limit of the rod nor the designed strength of the joint are often exceeded in well operation. Alternate tensile and compressive stresses undoubtedly cause more rapid fatigue than the alternate application and release of a tensile load.

The A. P. I. rod joint has been found to be more satisfactory than preceding joints, if properly made up. A. P. I. rod joints should be snapped up with a 36-inch wrench to secure the best results. An important feature of preventing pin breaks is that of obtaining a perfectly clean set of threads before making up. The manufacturers of high grade A. P. I. sucker rods are producing a more balanced rod than heretofore as the number of joint breaks and body breaks are more nearly equal in spite of the fact that higher tensile strength steel is being used.

Excessive acceleration and consequent dynamic loads may best be reduced by proper counterbalancing if the ordinary surface pumping equipment is to be used. Special pumping units, designed to permit a more uniform acceleration, are available but as these units are in the somewhat experimental stage and not free from additional mechanical trouble, they will not be considered.

Counterbalancing must be considered under two separate and distinct phases; first, that of reducing sucker rod acceleration, and second, that of decreasing the load on the engine or other prime mover.

In order to reduce rod acceleration the counterbalance design must be such that a smooth beam motion is obtained on both strokes. If the angular velocity of the band wheel is constant, the motion of the polished rod will approximate a harmonic motion. By counterbalancing so that the band wheel shows up slightly after the upper crank center is passed and before the full load of the well is picked up, the impact load may be reduced and acceleration will be more uniform. This method of counterbalancing relieves rod loads but increases the peak loads on engine and belting.

In counterweighting for the purpose of reducing power consumption or engine loads a uniform angular velocity of the band wheel is desired. The ideal counterweight for one purpose may not coincide with the ideal counterweight for the other and the proper medium must be obtained. The only accurate method of determining the proper counterbalance is by use of a well dynamometer and either a recording wattmeter or gas engine indicator. Dynamometer records have revealed many load peaks and eccentricities which are not otherwise noticeable.

Of the present types of counterbalances, the grasshopper type is the more common. Either the grasshopper or the sliding block type are easy to install and do not cause excessive rig strain but neither type will permit the use of an adequate weight. The band wheel and pitman types of counterbalance permit more suitable weights but are hard to handle and cause excessive strain on the rig and rig irons. There is a definite need for a better design of counterbalance.

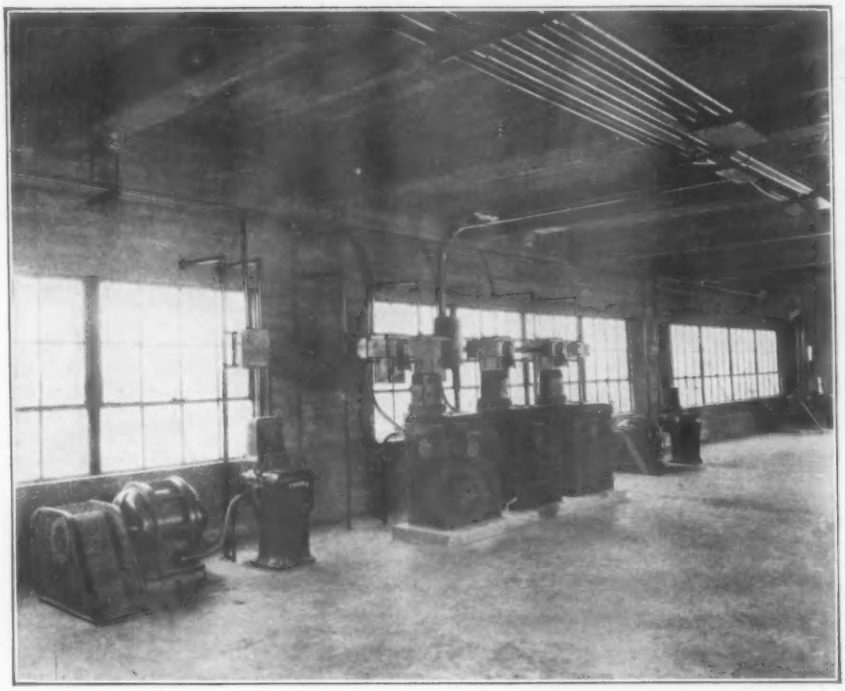
Heavier balances on gas engines and small fly-wheels on motors or jack shafts have been suggested as a means of reducing power loads. Devices of this type must be designed so that the weights may be readily removed when pulling rods or tubing.

Sucker Rods and Deep Well Pumping

By W. K. WHITEFORD

IT was established very early in the pumping of deep wells that rod trouble increased very rapidly with increased depth. As it was not practical to increase the size of the rods due to the fact that the increased weight of the total string counteracted to a serious degree the gain in tensile strength, as well as increasing the problem of proper counterbalancing. A study of the rod records also revealed that over one-half of the breaks in the old type of rod were pin breaks. This ratio has been materially decreased by the use of especially heat treated pins—but there is still room for improvement. Experiments and tests, both laboratory and field, are being carried on constantly in the effort to increase the body strength of the rods by the use of alloy steels and heat treatment. Rods of A. P. I. specifications are in general use and as a whole, considered most satisfactory in performance. In order to develop the present rod, much laboratory work was necessary from both a chemical and physical angle, and to properly check the conclusions drawn there it is essential that accurate field records of their performance be kept augmented by information that may be obtained from dynamometer, indicator card, and wattmeter readings. Data obtained from the dynamometer not only enables one to know whether on not his rods are being overloaded, but serves as an analyzer of the correctness of the operation of the rest of his pumping equipment. Many strings of rods are condemned for failing that the dynamometer, if used, would have pointed to some other part of the equipment as being the trouble maker, such as faulty counterbalancing, plunger sticking, too high or low a pumping speed, wrong length of stroke, or a poor combination of both speed and length of stroke, loose jack posts or Sampson posts, loose pitman bearing, polish rod pulling too far out of line, engine governor not properly set, ro any one of many common causes of trouble in the pumping equipment. It is interesting to note that many of the well that have been weighed in Seminole show that the rods were heavily over-loaded.

The more records of this type that ve keep the more rapid will be our improve-



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ment on all parts of our pumping equipment and the lower result and cost for each barrel of oil lifted. Better care of the equipment in use by the proper instruction of the well crews in such matters will pay large dividends. One company has decreased their down time to a remarkable degree by merely instructing their well crews to reject all rods that are kinked and not attempt to straighten them by pounding with a rod wrench or hammer. Hanging rods instead of laying them down on a rod walk tends to minimize the kinking danger. Care to see that no tools are used on the rods that would cause a cut in the surface skin will prevent many a rod failure. Some companies are saving themselves considerable potential rod trouble by making a careful inspection of the new rods before running them, and all rods that show any signs of surface cracks or having scales rolled into the rod body, are rejected. In making up the new A. P. I. rod, considerable care should be used in seeing that they are properly set up and shouldered. Where a study of records reveal a preponderance in the upper 1500 to 2000 feet of the string, taper strings have been used to a very good effect. The ¾-inch A. P. I. rod is in general use in Seminole. Breaks seem to be about evenly divided between the pin and body. Some companies are using with success the box and pin type in place of the double pin. Many types of rod guides are in use with the best results being obtained from fiber or wood. Metal guides seem to have been unsatisfactory in almost every instance. A new Bakolite guide is being experimented with which seems to have considerable possibilities.

Volumetric Efficiency of Pumping Wells

By D. L. TRAX

THE efficient operation of an oil well pump is possible only by taking into account the type of well in which it is to be used, then selecting a pump that will meet the requirements involved, and operating it with both peculiarities of the well and the specifications of the pump in mind.

The pumping operation consists simply of lifting the fluid, one stroke at a time, until it reaches the surface. It would seem that the faster the pump is operated and the longer the stroke of the pump, the greater would be the production, but there is a place between the low speed and the high speed and the long stroke and short stroke where the lines of efficiency meet and an increase or a decrease of speed or stroke will decrease instead of increase the production.

With an investment of $10,000 to $70,000 per well it is important that efficient equipment be used in order to obtain the greatest returns on the investment. If the fluid production of a well is accurately gauged at regular intervals, the volumetric efficiency of the pump may be determined by dividing the number of barrels actually pumped by the volumetric displacement of the pump. The volumetric displacement is the exact area of piston or plunger in square inches times length of stroke in inches, times number of strokes per minute, times minutes operated and this amount in cubic inches reduced to barrels. In the determination of volumetric effiency of a pump in this manner, the hydraulic efficiency of the pump is of course included and in some cases a low volumetric efficiency may be due to a low hydraulic efficiency.

It has been found that volumetric efficiencies range from 11 per cent. to over 100 per cent. In the case of the low efficiency, on investigation it was found that the valves were leaking while in the case of efficiencies over 100 per cent. gas in combination with the oil was assisting the pump. Hence, a low volumetric efficiency of a pump may indicate leaky balls and seats, worn cups or plunger or the wrong method of operation.

The speed of pumping is a prime factor. At a very slow speed the inertia of the fluid increases the power required. At too great a speed, the friction of the pump may cause sucker rods to kink or whip with the result that the traveling valve only partly completes its stroke and the fatigue action on the rods becomes excessive.

The speed of operation is affected to a great extent by the length of stroke. If one long stroke will lift the fluid as far as two short strokes in the same time, real economy is effected through the longer stroke. This economy is not only a reduction in wear and tear on equipment, but will increase volumetric efficiency of the pump by reducing the vibration of the sucker rods and overcoming to some extent the loss of stroke caused by the spring or stretch in the rods. It has been determined that when operating a pump in a shallow well, the length of the stroke on the pump is practically the same as the length of stroke at the surface. In deep wells, however, this spring may be considerable and can only be estimated on account of varying gas pressures and other conditions. The tubing is also somewhat elastic and has a tendency to move up and down as the fluid weight shifts from the sucker rods to the tubing. This movement is indicated by the vertical wear on the tubing couplings.

In determining the proper rate of pumping, it is well to remember that the space between the valves must be entirely filled with fluid on each upstroke of the pump. Where this is not the case, the traveling valve pounds on the downstroke, forming gas pockets with a loss in efficiency. Too rapid pumping may reduce the fluid level, allowing the admission of gas or air in the working barrel and also decrease the efficiency.

There is no set rule regarding the submergence of an oil well pump, but it is usually desirable to secure the maximum head of fluid on the standing valve. Unless submerged to sufficient depth in fluid, the pump depends upon the suction effect of the upstroke of the traveling valve to draw in a supply of fluid. This is usually inadequate to fill the working barrel with a full fluid column because of the restrictions imposed by the ordinary standing valve. The resistance to flow offered by this valve increases proportionately as the speed of the traveling valve increases, hence the greater the speed of the traveling valve, the greater should be the submergence in overcoming resistance offered by the valve, hence insufficient submergence with the friction losses through the standing valve and openings to the valve tend to lower the hydraulic efficiency which in turn decreases the volumetric efficiency.

Every pumping well should be studied and every effort made to maintain maximum production by efficient methods of operation. How long a stroke to use and how best to provide that stroke is a matter for production operators to determine with their respective equipment, but a careful consideration of this subject indicates the methods toward which to work.

Working Barrels and Valves

By L. B. HOLLAND

DISCUSSION of working barrels and valves alone could well occupy the attention of this meeting for a much longer period than is allotted to this subject in this paper.

Although various types of special barrels are used in the Mid-Continent district, under special conditions, by far the largest percentage is what is ordinarily called the "common" barrel which consists of a tube in which operates a cup type pump. For this reason this discussion will be largely confined to a brief outline of some of the difficulties which have been experienced with the common barrel and some suggested remedies for these troubles.

It is true, however, that the plunger type pump, which is used to such a great extent in California, has also been used in the Mid-Continent district, but it has been found that when used to pump any except the heaviest oils it becomes necessary to equip the plungers with cups in order to allow sufficient clearance between the plunger and the barrel to insure successful operation. The difficulty seems to be that when used in high gravity oil, the fluid

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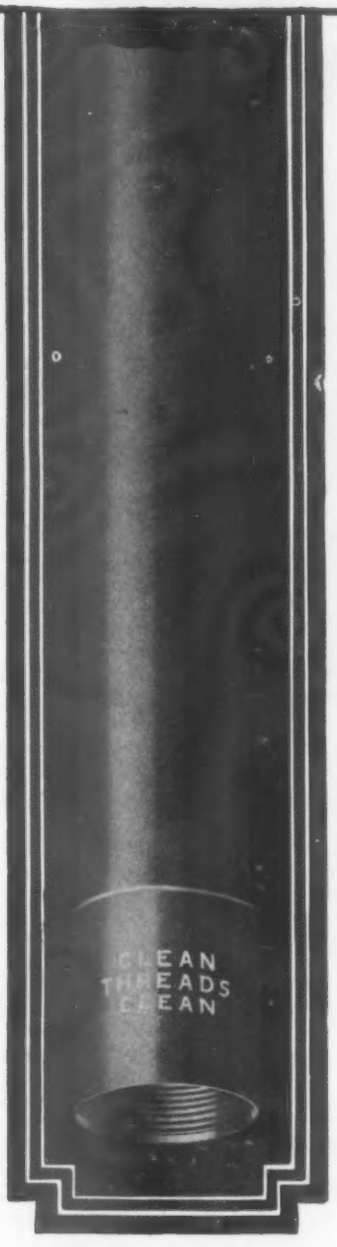

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seal between the plunger and the barrel is not sufficient to prevent slippage.

A large amount of thought has been expended in the improvement in traveling valves. Some operators and manufacturers previously contended that there should be sufficient clearance between the valve body and the followers to permit the valve to be readily dismantled for replacement of cups even though sand should have worked into the clearance space. Some of the operators of one of the Mid-Continent companies developed the idea that such excessive clearances as had been used between the followers and valve bodies would tend to cause lost motion to develop, allowing the followers and cups to tip one way on the upstroke and the opposite direction on the downstroke, causing early leakage past the cups which in turn would increase pulling costs due to the greater number of pulling jobs. After this condition was remedied, and the valve bodies and followers so fitted that there was a slip fit, the number of pulling jobs were materially decreased.

At the present stage of the oil industry, it is very rare that there is occasion to criticize any one particular class of manufacturers of oil field equipment. However, since the custom in the past has been to purchase common working barrels on a price, rather than on a quality basis, it is not surprising that the common working barrels which have been on the market until the past few months have shown such a large variation in inside diameters together with a lack of care in finishing them.

The requirements on working barrels is that the tube be of uniform internal diameter, smooth interior surface, straight and of hard material of sufficient tensile strength that the tube will not distort under the pressure met in working barrels and that the threads will be sufficiently strong that failure will not occur at this point. Inasmuch as the tensile strength and hardness increase with the carbon content of steel and properties of steel which cause it to draw smoothly decrease with an increase of carbon content, it is readily seen that the grade of steel used for this purpose is merely a compromise.

Another difficulty attendant to checking of the accuracy of the internal bore of working barrels is the fact that at the present time there is not an instrument available by means of which the internal diameter of two-inch or two and one-half inch barrels can be checked throughout their whole length.

The very crude method of "feeling" of the inside of the wroking barrel with a working valve cup or a "go" gauge has caused as many as 23 out of a shipment of 25 working barrels to be rejected by one producing company in the Mid-Continent area. Splitting the barrels lengthwise has also revealed that barrels which appear smooth when looked through may be very rough. It is estimated by different companies that from 25 to 50 per cent. of cup trouble is chargeable to rough working barrels.

If this be the condition, the solution of the problem is the development of a straight working barrel which has a smooth interior surface, is of uniform internal diameter, and at the same time is as hard as possible so that it will resist abrasion in operation. It is doubtful whether a steel tube using carbon alone for the hardening agent can be made of sufficiently smooth interior surface that it will resist wear. It is believed that experimental work on alloy steels for working barrels is justified by the demand for better working barrels.

Another means for solving this problem is by removable liners or by interior coatings applied to barrels made of soft steel which had been made smooth previous to the application of the coating. Cast iron liners in steel barrels are being tried with more or less success. There are two difficulties with cast iron liners in steel barrels. One of these is the almost impossible task of grinding a tube longer than 12 inches. The other is that the coefficient of expansion of steel is slightly higher than that for cast iron. This causes the sectional liners to tend to become loose in the steel shell in the well or when exposed to the sun, due to the materials of which the barrel is constructed, reaching a higher temperature than the one at which the cast iron sections were assembled in the barrel.

The possibility of lining the barrel which has previously been made smooth with a hard coating is another line along which work might be done. Glass liners for working barrels have been tried without much success. Several of the large enameling companies have advised that the coating of the inside of the tubes with enamel would not be practical.

Some work has also been done in the electroplating of the interior of working barrels with a metal which is sufficiently hard to resist abrasion. It is believed that this is the ultimate solution of the problem of obtaining working barrels which have the required properties of being straight, and of uniform internal diameter, and with a smooth interior surface sufficiently hard to resist abrasion.

Pumping Records

By J. R. McWILLIAMS

PUMPING records tabulating the reason for the down time on a well as useful to the superintendent and executive in charge of production as cost records are to the management of a company. It is just as important to know why a well is not pumping regularly as it is to know how much it costs to pump the well. Lifting costs tell whether it pays to pump a certain well; and pumping records tell whether the well is down so much that it cannot produce the amount of oil it is capable of producing.

The information in Table 1 illustrates the reduction in down time per well per day that one of the Mid-Continent companies experienced after installing a simple system to indicate to those in charge of production the reason a well was not pumping and the length of time that elapsed before pumping was resumed.

It will be noted in Table 1 that in the Duncan district, the average weighted down time per well per day was reduced from 1.401 to 0.330 hours per well per day over a period of two years. With the exception of one or two districts the superintendents in charge were able to show a substantial reduction in the amount of time their wells were not pumping. It is believed that the information furnished by the down time system was largely instrumental in securing this reduction in down time by assisting the superintendent to know what particular wells were causing the down time, and what the reasons were that the wells were not pumping. In most districts a superintendent cannot visit all of the properties under his charge in one day so it is desirable for him to know what particular properties need his attention.

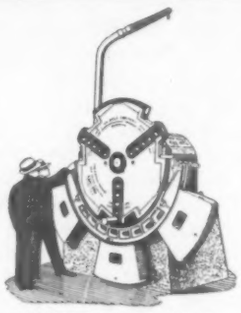
A record which states the reason why a well stops pumping is of considerable value in detecting whether a piece of equipment is suitable for the particular well in question. Perhaps a worn out engine is used in a power to pump 10 or 12 wells. The pumper tries to keep the engine running but he has a difficult job. The superintendent knows that the engine is in had shape but it takes data tabulated over a period of time showing that the major part of the down time on 10 or 12 wells is caused by a worn out engine to prove that it is economical to junk the old engine and buy a new one.

A record tabulating the reason why wells stop pumping puts definite information in the hands of those responsible for the operation of the wells, and in addition allows anyone interested in operations to have the same information as those actually on the ground.

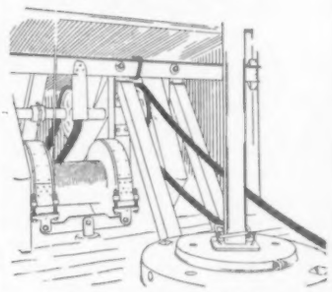
(Continued on page 58)

TABLE NO. 1
WEIGHTED AVERAGE DOWN TIME IN HOURS PER WELL PER DAY

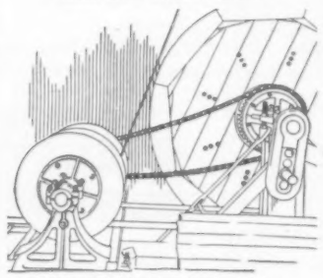
District	Dec. 1926	March 1927	June 1927	Sept. 1927	Dec. 1927	March 1928	June 1928	Sept. 1928
Burkburnett	.570	.413	.356	.371	.387	.371	.377	.390
Desdemona	.870	.659	.503	.520	.472	.684	.753	.771
Duncan	1.401	.726	.480	.405	.386	.392	.359	.330
Hewitt	.883	.710	.747	.688	.663	.657	.628	.603
Powell	1.679	1.355	1.293	1.115	1.068	1.068	1.036	1.019
Arkansas		1.676	1.396	1.361	1.364	1.366	1.336	1.336
Kansas			.531	.572	.583	.565	.534	.484
Burbank								
Cushing		.762	.513	.533	.540	.508	.555	.577
Slick-Bristow		1.008	.823	.796	.809	.816	.791	.764



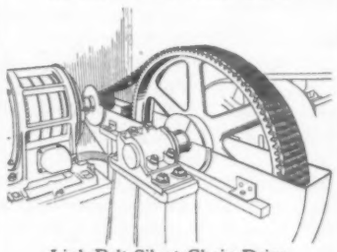
RUF-NEK Pumping Unit



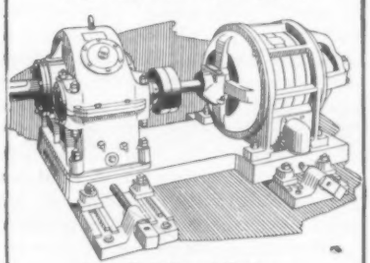
Link-Belt Rotary Chain



Link-Belt Roller Chain Drive



Link-Belt Silent Chain Drive



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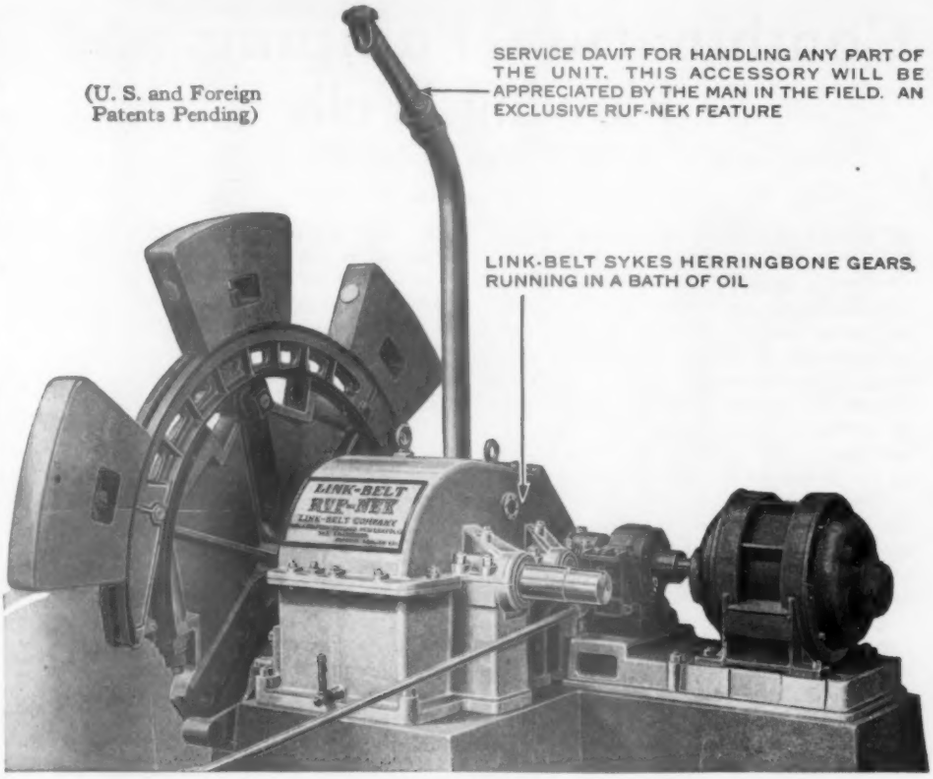

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By MORGAN WALKER

(Continued from page 56)

COMBINATION flowing and pump- makes it possible to produce more fluid from deep wells making large volumes of oil and water and on which the rock pressure is low, than can be pumped with the ordinary pumping equipment. The equipment usually consists of a hook-wall packer run on the tubing and set in the casing above the sand. If there is a liner in the hole, the packer is usually set in the liner. Perforations are cut in the tubing above the packer. Rods are run just as they are in the ordinary pumping installations together with the same style of working barrel and traveling valve.

The oil and water are pumped in the regular manner up to the point where the perforations are cut in the tubing, and gas is introduced into the fluid column either from the tubing or from the annular space between the tubing and the casing. The advantage of flowing up between the tubing and the casing is that a smaller string of tubing can be run for a given amount of oil and water to be handled. The disadvantage is the the rods have to be lubricated from the surface. This is done by forcing oil into the gas line near the well.

If the fluid is to be delivered through the tubing, a string of four-inch tubing is usually run with a string of ¾-inch rods. With this equipment 700 barrels of oil and water can be handled per day with a gas volume of 1,000,000 cubic feet per day and a working pressure of 300 pounds per square inch from wells 4000 feet in depth. If the oil and water are to be handled through the annular space between the tubing and the casing, three-inch tubing is usually run for the same set of conditions as given above. With the latter installation the working pressure will usually be 250 pounds per square inch and the volume of gas required about 1,150,000 cubic feet per day. The formational gas-oil ratio is about the same as that obtained by swabbing.

The cost of combination flowing and pumping is usually less than that for swabbing, due to less damage to equipment and about the same amount of fluid can be handled. Due to the added compressor costs, this method costs more than straight pumping but rod breakage is reduced and more water and oil can be handled.

This method of production is used largely for determining the potential capacity of wells after the water production has increased until the water can no longer be kept down by straight pumping, and if it is found that the oil production is large enough to warrant its use, it may be continued.

Radio Indorsed by Government Officials for Oil Prospecting

WASHINGTON, D. C.—Requests of various oil companies for radio station construction permits for use in connection with geophysical prospecting, which were presented to the Federal Radio Commission on November 13, received the indorsement of three departments of the federal government. Dr. George Otis Smith, director of the Geological Survey, Dr. Frederick W. Lee, of the Bureau of Mines and Major William Bowie, chief of the Division of Geodsey of the United States Coast and Geodetic Survey, were the government officials who testified.

Dr. George Otis Smith said in part, "As director of the U. S. Geological Survey, I have had contact with the petroleum industry for more than 20 years. To me, the public interest attaching to the oil industry is self-evident. Like the mining of coal, the production of oil has become an indispensable service to the industrial and domestic life of our country. In its first report, the Federal Oil Conservation Board clearly defined its task as one of reducing present waste and insuring future supply. This board urged continued and expanded research by the Geological Survey and its geologic studies of the structure of oil bearing areas. The oil pools that have yielded the ten billion barrels of our past production have been discovered in considerable part on geologic evidence afforded by surface indications. But more and more, as the production of these known fields declines, the hunt must be extended into areas where the surface rocks afford little or no clue of what lies beneath. Fortunately, through the newly developed and scientifically applied methods of what has been termed geophysics the trained searcher for oil is now enabled to see far below the earth's surface and to detect and locate geologic structure favorable for oil accumulation. The search for and blocking out of additional oil pools is plainly in the interest of oil conservation. In attaining the desired end of establishing underground reserves by the producing companies, no agency promises more effective service than the geophysical methods of preliminary exploration. Any help that the Government can extend to the private corporations that perform this public service would seem to be the best public policy and directly in line with President Coolidge's instructions for the Government to join forces with the oil industry in working out the problem of oil conservation."

Dr. Frederick W. Lee said in part, "I wish to call to your attention two important uses for radio for which provision should be made before the practicable bands are finally apportioned. These uses are (1) for geophysical prospecting and (2) for experimentation in the possible use of radio to the rescue of entombed miners. Most of the prospecting for oil by geophysical methods is done in regions remote from radio stations and therefore offers a minimum of interferance. The continuing discovery of oil, ore and gas deposits is a matter which concerns the public welfare to an enormous extent, and is comparable in its importance to the continuance of transportation facilities . The need of the reservation of powers up to 100 watts is very great and will probably increase with time. Representatives of the National Research Council, private corporations, and of the Geological Survey have all urged the Bureau to use its good offices in this matter. The application of radio methods should not be restricted in frequency or power to any band, since the effect of direct application of these waves to the ground structure depends upon both frequency and power."

Major William Bowie's testimony in connection with the use of radio for geophysical oil prospecting was in part as follows: For the past six or seven years the observers of the Coast and Geodetic Survey have been making use of radio in determining the periods of the pendulums at the field stations and, as a result of this, the work has been epedited and the cost per station materially lowered. As far as I am aware, I was the first investigator to set forth the conclusion that outstanding differences are caused by extra light or extra heavy material close to the stations and at a moderate depth below the surface. It is now generally recognized throughout the geophysical and geological world that the conclusion is sound, and I understand the application to practical prospecting is being carried out. I believe that the application of gravity pendulum observations to geological exploration has a brilliant future ahead of it and would regret to see any obstacles placed in the path of such development. Geophysical prospecting in general and prospecting by gravity pendulums in particular is a systematic type of exploration. The systematic development of our natural resources is certainly in the public interest."

Prairie Listed

Tulsa.—Prairie Oil & Gas Company has announced that its application for listing upon the New York Stock Exchange has been approved and that commencing with the opening of business December 20th, 1928, the Transfer Office at Independence was closed and until further notice the Guaranty Trust Company, New York City, will act as transfer agent and The Equiable Trust Company of New York, Registrar.

The Long Trek

Down the endless pulley miles of power transmission a "Camel Hair" Belt goes serenely on its way, utterly impervious to the hardships of oil country service, as peculiarly adapted to its task as the Camel to the Desert. Indispensable for the long trek.

"CAMEL HAIR" BELTING

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Axelson Machine Co.
Sucker Rods, Pull Rods, Plunger Working Barrels (Pumps) etc.

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Joseph Reid Gas Engine Company
Gas and Oil Engines, two and four-cycle, Band Wheel and Direct Drive Pumping Powers.

Whitlock Cordage Co.
Manila Cordage, including Frick-Reid Manila Bull Ropes—same quality for ten years.

Jones & Laughlin Steel Corp.
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Walworth Company
Valves, Fittings and Tools for Steam, Water, Gas, Oil and Air.

Rossendale-Reddaway Company
"Camel Hair" Beltings, Belt Clamps.

Engineering Crews
for the installation of Pumping Powers and related equipment.

Sand at 2600 Feet in Champagnolle May be Graves Formation

SHREVEPORT. — A showing of oil in a sand around 2600 feet in the Champagnolle district of Union County, Arkansas, leading many to believe that the Graves sand, so prolific in Smackover, has been found in the new field, and the heavy oil sand cored in a wildcat well in Calhoun County, Arkansas, were the only two bright spots in the week in the North Louisiana, South Arkansas and East Texas territory.

It is the Ohio Oil Company's Ward 1, in Section 15-17-14, on the extreme southeast end of production in the older Champagnolle area. This well showed approximately 1000 feet of low gravity oil at 2614 feet. However, the well will be drilled deeper in search of light oil.

Joe Hurley's Arkansas Land and Timber Company 1, Section 29-19-12, Calhoun County, several miles east of Union County production, cored a rich oil sand from 2304 to 2314 feet. A string of 6⅝-inch casing is being set for a test.

Aside from these two showings the week was featureless, the pre-Christmas lull in activity being blamed for the fact that not a single producer was added in the tri-state area and only five gas wells. These, with four failures, all wildcats, comprised the total of the weekly completions report.

The week before had accounted for four producers with a combined initial yield of 280 barrels, four gassers and five failures.

Three of the last week's gassers were in Louisiana, all in the Monroe field. In Morehouse Parish Natural Gas Products Company completed Tensas Delta 13, in Section 34-22-4e, at 2203 feet as a 3,000,000 foot gasser, while in Ouachita Parish Magnolia Petroleum Company's Millsaps 3, in Section 26-20-4e gauged 1,500,000 feet at 2195 feet and the Union Consumers Gas and Fuel Company's Slaughter 2, in Section 24-19-4e made only 600,000 feet at 2223 feet.

Champagnolle's southeast and west portions of the older field each accounted for a 40,000,000 foot gasser. Magnolia Petroleum Company's B. K. Gregory 1, in Section 15-17-14, on the southeast side being completed at 2823 feet and Skelly Oil Company's Kelley 1 in Section 9-17-14, being completed at total depth of 2830 feet.

Two of the four wildcat failures recorded during the week were deep tests. Triangle Drilling Company went to 4558 feet in Bulkley 1 in Section 9-20-13, Bossier Parish, Louisiana, before abandoning the test as a salt water hole, and The Texas Company quit its Hamlin 1, in Section 28-10-13, Sabine Parish, at a total depth of 4304 feet. The latter well had shown about 150,000 feet of gas around 3700 feet. In the Blanchard semi-wildcat district of Caddo Parish Tidal Oil Company tested salt water at 2500 feet in McGrary 1, in Section 23-19-16, and abandoned hole. Imperial Oil and Gas Company's third completion of Goodwin 1, in Section 26-17-16, Union County, Arkansas, ended in failure as had the two previous tests. The hole was abandoned at 3139 feet after salt water was encountered.

New drilling was slightly off during the week, only nine new locations having been announced, five of them in Arkansas of which there were in Champagnolle.

Woodley Petroleum Company did not announce location for its Whitehurst 3, in the unsectionized part of township 16, range 12, Caddo Parish, until a depth of 2300 feet had been attained. This test offsets the No. 2, on the same lease completed two weeks ago as a 6,000,000 gasser at 2475 feet. In Union Parish (Monroe) the Interstate Natural Gas Company has just spudded in Hodges 1, in Section 4-19-3e, while on the Ouachita Parish side of Monroe Ouachita Natural Gas Company has derrick up for Leiber 5, in Section 4-19-4e. Six miles southeast of gas production in the Richland Parish field Richland Operating Company has spudded in Chapman 1, in Section 19-16-7e.

In Arkansas, Humble Oil and Refining Company has projected another test on the very productive Groves lease in Section 6-14-20, Nevada County, the latest for Groves D-1. In Ouachita County Little Fay Oil Company has derrick up for another test in Section 24-15-16, the latest test being Canada 1, NW of SW of the section.

All three of Champagnolle's new tests are in the older part of the field. O. W. Estes has made location for W. K. Gregory 1 in SW of SE of Section 15-17-14. E. C. Johnston, Trustee, will drill Gregory 3 in NW of SW of Section 10-17-14, and Olson Brothers are rigging up for Kelly 1 in NW of SE of Section 9-17-14.

Gulf Refining Company has set surface casing and is drilling at 113 feet in Caraway 1, in the Patterson survey of Shelby County, Texas. This test is two and one-eighth miles north of the same company's Pickering Lumber Company 1, in the same headright which was completed in rank wildcat territory several weeks ago and is still flowing about 25 barrels of oil from total depth of 3440 feet in limerock formation.

Dixie Oil Company has at last cleaned the hole in its Robertshaw 92, in Section 13-21-15, Caddo Parish, Pine Island district, the deep test which showed gas and oil at 6099 feet and is waiting on casing for another test. The company is coring at 4225 feet in Gilbert 1, in Section 27-21-5w, Claiborne Parish, after cementing a full string of 6⅝-inch casing at 4201 feet. Smitherman & McDonald's Miller 1, in Section 17-23-8, of the same parish, is another deep test. Arrangements are being made to set seven-inch casing at 4190 feet.

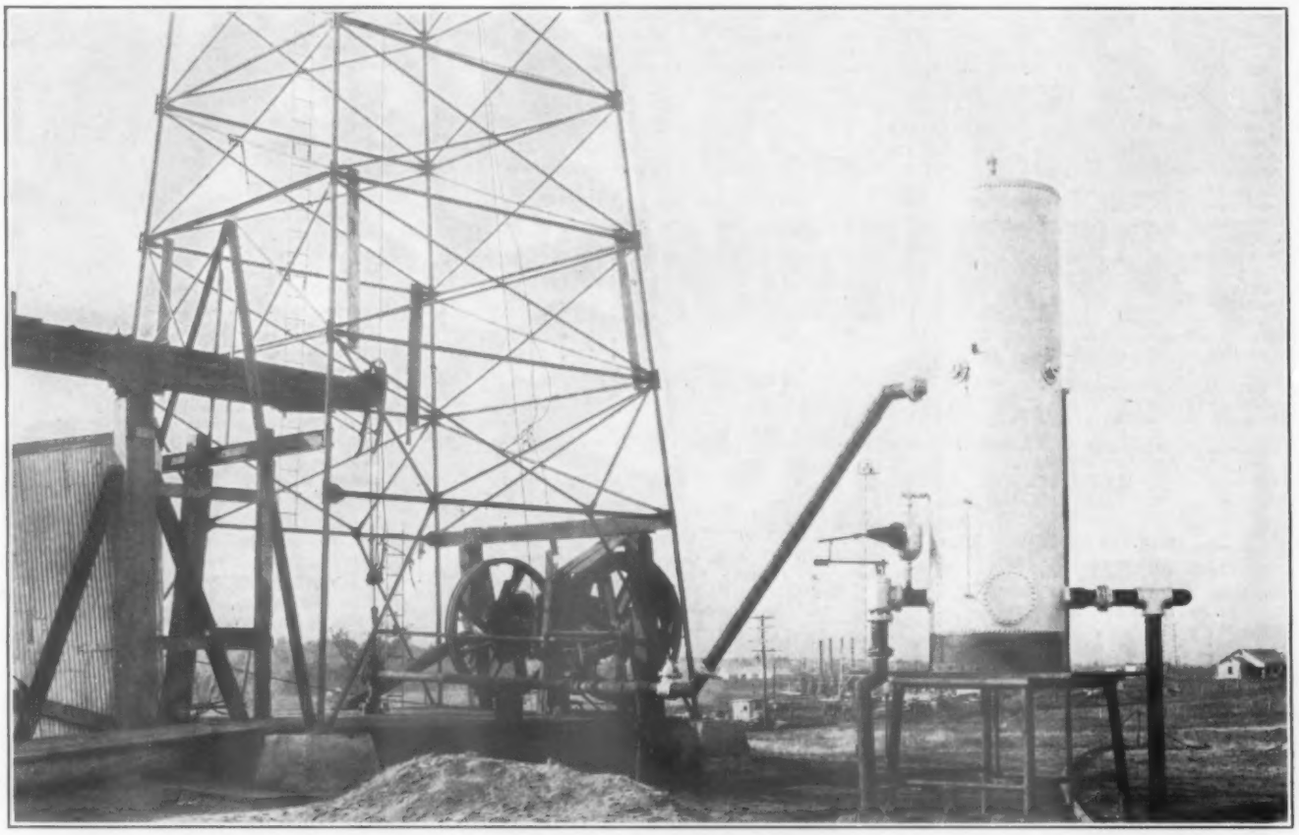
In DeSoto Parish Benedum & Trees are waiting on fuel to deepen State 1, a wildcat test in Section 22-14-12, which came in a fortnight ago making 25,000,000 feet of gas and a spray of salt water at a total depth of 2632 feet.

R. L. Gay, Trustee, whose Bowman-Hicks 2 in Section 14-7-14, a rank wildcat, in Sabine Parish, is maintaining a steady flow of 50 to 55 barrels daily of clean oil from the Nacatoch sand at 2130 feet, is rigging up for two nearby tests, Bowman-Hicks 2 (new series) in Section 14-7-14, and Sabine Lumber Company 1, in Section 13-7-14.

Magnolia Petroleum Company appears to have another pumper in Section 1-22-11, Webster Parish, offsetting a 150 barrel well completed in T. C. Cook 1, in the same section several weeks ago. The new well is Scroggins 1, which is standing with 1500 feet of oil in the hole at 2709 feet. These wells are about two miles southeast of the Sarepta gas field and southeast of the pumpers completed on the Pinewoods Lumber Company lease in 37-23-11. Rock Petroleum Company is still trying to revive Pierson 1 in Section 21-14-11, Red River Parish, a wildcat, which has nine feet of sand at 1761 feet.

None of the Arkansas wildcats, aside from Hurley's Arkansas Land & Timber Company 1 in Section 29-16-12, Calhoun County, which cored oil at 2304 to 2314 feet, is doing anything extraordinary. McDonald Brothers who lost the first hole in Wilson 1, a wildcat between Louann and Stephens production, and located in Section 25-15-18, Ouachita County, are down to 2010 feet in the new hole after derrick was skidded over 40 feet. Sam Sklar, Trustee, has cemented 6⅝-inch casing at 2142 feet in Fitzgerald 10 in Section 8-18-15, Union County.

"If it's worth drilling for it's worth saving"



Type No. 7 Smith Separator, Mission No. 1 Well, Gypsy Oil Co., Mission Pool, Oklahoma

The Discovery Well of the New Mission Pool is SMITH SEPARATOR-EQUIPPED!

Smith Separator handling production from discovery well Mission Pool, placing the oil in stock tanks at casing head gravity and dry gas in gas line.

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Smith Separators are constructed according to the A. S. M. E. Boiler Code with Safety Factor of Three, and due to their quality the Producer is assured of the greatest returns for the money invested from efficiency, safety and durability.

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Export Office: Oilfield Equipment Company, 30 Church St., New York, N. Y.

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

SUMMARIZED REVIEW OF FIELD RESULTS

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Production This Week	Initial Production Last Week
Arkansas	4	8	..	4	2	..	2	4	...	285
California	23	10	22	10	..	..	1	..	44,825	11,750
Colorado	..	3	..	3	..	..	..	..	...	175
Illinois	..	2	..	2	..	..	..	..	...	55
Indiana	7	1	5	1	..	..	2	..	85	10
Kansas	14	6	4	4	1	..	9	2	3,550	525
Kentucky	23	44	16	24	..	3	7	17	616	860
Louisiana	17	19	5	4	3	4	9	11	2,540	435
Michigan	8	2	2	1	3	..	3	1	400	600
Montana	..	7	..	7	..	..	..	..	...	555
New York	25	..	25	..	..	..	..	..	112	...
Ohio	46	54	20	17	16	27	10	10	368	466
Oklahoma	58	63	28	41	5	5	25	17	13,085	28,744
Pennsylvania	80	52	61	42	9	5	10	5	208	560
Texas	116	165	69	102	4	6	43	57	33,647	72,046
West Virginia	22	29	3	9	15	15	4	5	32	56
Wyoming	..	3	..	3	..	..	..	..	...	600
Total	443	468	260	274	58	65	125	129	99,468	117,722
Increase this week	..	..	..	..	..	..	..	..	...	...
Decrease this week	25	..	14	..	7	..	4	..	18,254	...

KANSAS

Company, Well and Location	Initial Production Bbls.	Depth
BUTLER COUNTY—		
Syndicate Oil Company, Brewer 1, nw ne nw, 26-27-6e	*	2820
COFFEY COUNTY—		
Union Gas Company, Gayer 1, ne se, 8-22-14e	¶1	1360
Cross et al, Baer 1, ne se sw, 9-23-14e	*	1650
ELLIS COUNTY—		
Slick et al, Craig 1, c nw ne, 8-11-16w	*	3545
GREENWOOD COUNTY—		
C. L. Sheedy, Newman 1, se sw se, 32-23-13e	75	1641
MARION COUNTY—		
Gear et al, Regis 1, nw sw nw, 18-21-4e	*	2720
MORRIS COUNTY—		
Loomis and Anderson, Sissan 1, nw se, 14-17-7e	*	1735
RUSSELL COUNTY—		
Streeter and Stearns, Haise 1, ne se se, 36-12-15w	*	3305
SEDGWICK COUNTY—		
Bu-Vi-Bar Pet. Co. et al, Lyons 1, sw nw sw, 7-26-1e	1500	3359
Lants 1, cel se, 12-26-1e	1800	3367
Fisher, Lauch et al, Strickland 1, se sw se, 18-26-2e	*	3558
SUMNER COUNTY—		
Shawver et al, Spense 1, (OWDD) se ne, 27-34-2e	175	3538
Dickey et al, Know 1, sw ne, 3-35-1w	*	4248
Pryor, Lockhart & Slick, Buss 1, ne cor, 35-31-2e	*	1980

OKLAHOMA

Company, Well and Location	Initial Production Bbls.	Depth
CARTER COUNTY—		
Texas Co., Eaves 1, nw sw sw, 24-1s-3w	120	2342
Gypsy, Morris 4, nw ne se, 29-2s-3e.	¶21	2547
H. L. Sturm, Fisher 1, sw ne sw, 35-3s-2w	17	959
CREEK COUNTY—		
Sunray Oil Corp., Fore 1, sw nw sw, 35-16-10e	300	3111
Shaffer O. & R. Co., Polk 1, nw ne se, 1-14-9e	*	3489
A. A. Thornton, Sherrill 1a, cnl nw nw, 2-18-11e	*	2470
C. G. Tibbens, White 10, ne nw, 9-18-12e	*	2262
HUGHES COUNTY—		
Jarvis & Holmes, Street 2, sw se nw, 21-7-8e	70	3155
Pure Oil Co., Fixico 1, ne sw, 18-8-9e	*	4500
Bauer et al, Penn 1, nw sw ne, 1-8-10e	*	4255
JEFFERSON COUNTY—		
Bridwell et al, Spring "B" 1, ne nw se, 25-6s-6w	*	2172
KAY COUNTY—		
Shaffer O. & R. Co., Mefford 1, c se, sw 18-29-1e	*	3520
Harold Pet. Co., Case 2, (OWDD) sw cor, 4-27-1w	*	3640
LOGAN COUNTY—		
J. E. Crosbie et al, Shaffer 1A, nw cor, 20-19-4w	2245	6125
MUSKOGEE COUNTY—		
M. S. Mussellem, Stover 1A, se sw se ne, 4-13-19e	10	1478
C. Allred et al, Monday 1a, nw se sw, 4-13-16e	*	1962
OKFUSKEE COUNTY—		
W. L. Umburn, Jackson 1, c sw sw, 35-11-11e	*	2550
OKMULGEE COUNTY—		
Iron Mountain Oil Co., Marshall 1, nw se sw, 8-16-12e	¶7	2228
Fred Hyer, Howard 1, ne se se, 17-15-14e	12	831
Gentry et al, Doyle 2, ne sw, 20-13-14e	*	2684
Becker & Hutchinson, Thompson 1, ne nw sw, 6-14-13e	*	2175
Speary Bros. & Mills, Lacey 9, cwl nw sw, 7-14-13e	*	2170
OSAGE COUNTY—		
Clint Moore Est. No. 20, se sw ew, 9-21-9e	20	270
No. 19, ne sw nw sw, 9-21-9e	5	318
I. T. I. O. Co., No. 29 (OWDD) se cor, 17-25-12e	¶1½	2068
PAWNEE COUNTY—		
Superior et al, Highbee 1, cel sw sw, 28-20-9e	*	1588
PONTOTOC COUNTY—		
O. K. Portland Cement Co., Alexander 1, ce¼ w½, 24-4n-7e	¶12	1280
Superior Oil Corp., Maulden 2, nw cor, 32-5-5e	180	2545
Homaokla Oil Co., Shields 9, sw ne ne, 4-4-8e	*	1720
POTTAWATOMIE COUNTY—		
Magnolia, Risenhover "B" 4, se ne, 14-7-4e	20	4212
Sinclair, Bruno 1, cnl ne, 26-7-4e	855	4275
Mid-Kansas, Gesselman 3, sw nw, 25-7-4e	115	4365
Shaffer, Tolon 2, nw sw sw, 20-7-5e	218	4433
Barnsdall, Stahl 3, ne sw ne, 30-7-5e	1060	4290
Sinclair, Bellars 1, ne nw ne, 19-8-5e	2000	4128
Tomlinson & Manning & Dye, Wisenhunt 1, nw ne se, 35-7-5e	*	4625
Mid-Continent Pet. Corp., Guinn 2, se ne, 20-7-5e	*	4395
Phillips Pet. Co., Sparkman 1, se sw, 15-8-4e	*	4672
SEMINOLE COUNTY—		
Sunray Oil Corp., Sarney 2, se ne nw, 19-5-8e	250	2654
Texas Co., Lucy 5, sw se, 18-5-8e	850	2650
Anderson & Pritchard, Cully 7, ne se, 18-5-8e	1800	2577
WAGONER COUNTY—		
J. Ellis, Lewis 1a, sw se, 27-16-17e.	10	1709
Gleason et al, Henry 5, csl nw sw, 29-18-15e	*	1281

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
ELWOOD—		
Rio Grande Oil Co.-Barnsdall Oil Co., Luton-Bell 3	5000	3317
HAWTHORNE—		
Smith Pet. Co., Berry 1	1200	5900
HUNTINGTON BEACH—		
Standard Oil Co., Thompson 9	50	3400
KERN FRONT—		
Associated Oil Co., No. 44, 23-28-27.	250	2225
LONG BEACH—		
Dollar Oil Co., Hoover 1	100	6160
Petroleum Exploration Co., Prudential 1	500	6262
Richfield Oil Co., Malcom-Davis 3	700	7345
Universal Consolidated Oil Co., Dell 3	700	6880
POTRERO—		
Associated Oil Co., Cypress 3	1000	4650
ROUND MOUNTAIN—		
Shell Co., Jewett 4, 29-28-29	375	1745
SANTA FE SPRINGS—		
Associated Oil Co., Green 3	5000	5780
Jordan 3	3750	5780
General Pet. Corp., Santa Fe 168C	2800	5650
Hill-Midway 2	4000	5705
Santa Fe 189C	1100	5785
George F. Getty, Imn., No. 22	6200	5650
Graham-Loftus Oil Co., No. 1	2500	5390
Shell Co., G. H. N. 14	3500	5790
Texas Co., Matern 3-11	800	5755
Twin Bell Oil Co., Grohs 4	3000	5495
SEAL BEACH—		
Standard Oil Co., San Gabriel 17	1200	4970
VENTURA—		
Associated Oil Co., V. L. W.	1100	7080

NORTH LOUISIANA

Completions

Company, Well and Location	Initial Production Bbls.	Depth
BOSSIER PARISH—		
Triangle Drilling Co., Bulkley 1, 9-20-13	*	4558
CADDO PARISH—		
Tidal Oil Co., McGrary 1, 23-19-16.	*	2500
MOREHOUSE PARISH—		
Natural Gas Prod. Co., Tensas Delta 13, 34-22-4e	¶3	2203
OUACHITA PARISH—		
Magnolia, Millsaps 3, 26-20-4e	¶1½	2195
Union Consumers G. & F. Co., Slaugh 2, 24-19-4e	¶3/5	2223
SABINE PARISH—		
The Texas Co., Hamlin 1, 20-10-13.	*	4304

(Continued on page 68)

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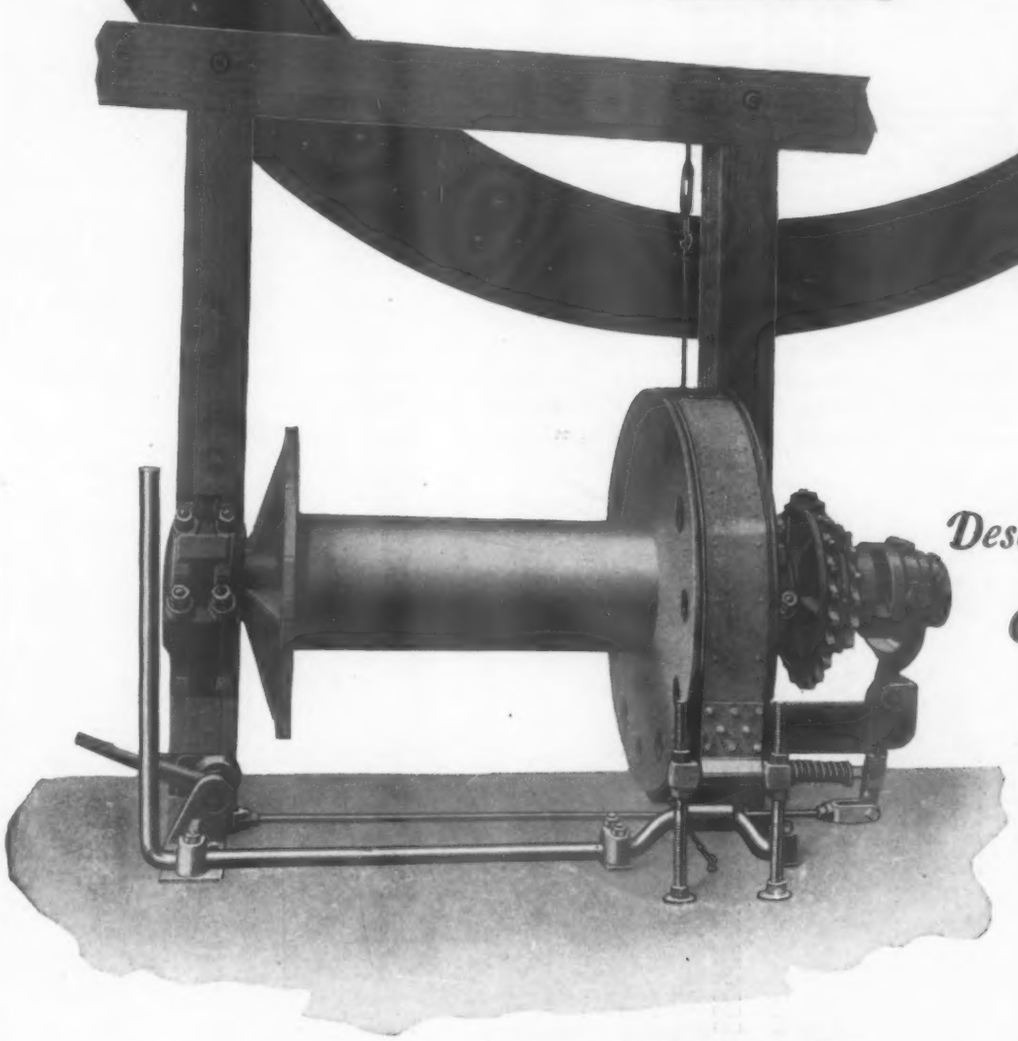


Descriptive Bulletin No. 14N. On Request

Say you saw it in The OIL WEEKLY

CRUDE OIL PRICE QUOTATIONS

CURRENT POSTINGS

EASTERN STATES

	Dec. 26 1928
Penna Grade Oil in New York Transit Lines (New York)	$3.85
Brandford District Oil in National Transit Lines (Pennsylvania)	3.85
Penna Grade Oil in National Transit Lines (Pennsylvania)	3.75
Penna Crude Oil in Southwest Pennsylvania Lines (West Virginia)	3.75
Penna Grade Oil in Eureka Pipe Line Lines (Pennsylvania)	3.65
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	3.60
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia) (July 13)	1.45
Corning 35-cent Grade Oil in Buckeye Pipe Line Co.'s lines (August 8)	1.80
Corning 25-cent Grade Oil in Buckeye Pipe Line Co.'s Lines (Aug. 8)	1.90
Somerset Oil in Cumberland Pipe Line lines (Kentucky) (Sept. 14, 1928)	1.75
Ragland Grade Oil in Cumberland Pipe Line lines (Kentucky) (August 1)	.95
Keister (Pennsylvania)	1.20

CENTRAL STATES

Illinois	1.55
Indiana	1.37
Lima	1.60
Plymouth	1.28
Princeton	1.55
Waterloo	1.35
Wooster	1.77

WESTERN KENTUCKY

Posted by Stoll Refining Company for crude from Allen, Warren, Franklin, Davies, Barren.

All grades	1.75

MID-CONTINENT

Carter Oil Company, Gulf Pipe Line Company, Sinclair Pipe Line Company, Prairie Oil and Gas Company and The Texas Company.*

25 to 25.9 gravity	:67
26 to 26.9 gravity	.74
27 to 27.9 gravity	.81
28 to 28.9 gravity	.81
29 to 29.9 gravity	.95
30 to 30.9 gravity	1.02
31 to 31.9 gravity	1.09
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.21
34 to 34.9 gravity	1.26
35 to 35.9 gravity	1.31
36 to 36.9 gravity	1.36
37 to 37.9 gravity	1.41
38 to 38.9 gravity	1.46
39 to 39.9 gravity	1.51
40 to 40.9 gravity	1.56
41 to 41.9 gravity	1.61
42 to 42.9 gravity	1.66
43 to 43.9 gravity	1.71
44 and above	1.76

*The Texas Company posts a price of 60 cents on 24 to 24.9 gravity, and Gulf's posting begins at 28 to 28.9.

MID-CONTINENT

Magnolia Petroleum Company

Below 25 gravity	.60
25 to 25.9 gravity	.67
26 to 26.9 gravity	.74
27 to 29.9 gravity	.75
30 to 30.9 gravity	.90
31 to 31.9 gravity	1.05
32 to 32.9 gravity	1.16

From 33 to 44 gravity and above, Magnolia Petroleum Company prices are the same as those of Carter Oil Company.

NORTH AND CENTRAL TEXAS

Ranger, North Texas, Mexia, Powell, Richland, Wortham, Currie, Moran, Nocona and Lytton Springs Crude

(Humble Oil and Refining Company)*

25 to 25.9 gravity	.67
26 to 26.9 gravity	.74
27 to 27.9 gravity	.81
28 to 28.9 gravity	.88
29 to 29.9 gravity	.95
30 to 30.9 gravity	1.02
31 to 31.9 gravity	1.09
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.21
34 to 34.9 gravity	1.26
35 to 35.9 gravity	1.31
36 to 36.9 gravity	1.36
37 to 37.9 gravity	1.41
38 to 38.9 gravity	1.46
39 to 39.9 gravity	1.51
40 to 40.9 gravity	1.56
41 to 41.9 gravity	1.61
42 to 42.9 gravity	1.66
43 to 43.9 gravity	1.71
44 and above	1.76

SOUTH TEXAS

Mirando	1.00

SOMERSET

Grayburg

Below 33 gravity	1.05
33 to 33.9 gravity	1.07
34 to 34.9 gravity	1.09
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.13
37 to 37.9 gravity	1.15
38 and above	1.17

GULF COAST

Grade "A" all companies	1.20
Gulf Coast Light Oil, below 25	1.15
25 to 25.9 gravity	1.17
26 to 26.9 gravity	1.19
27 to 27.9 gravity	1.21
28 to 28.9 gravity	1.23
29 to 29.9 gravity	1.25
30 to 30.9 gravity	1.27
31 to 31.9 gravity	1.29
32 to 32.9 gravity	1.31
33 to 33.9 gravity	1.33
34 to 34.9 gravity	1.35
35 to 35.9 gravity	1.37
36 to 36.9 gravity	1.39
37 to 37.9 gravity	1.41
38 to 38.9 gravity	1.43
39 to 39.9 gravity	1.45
40 and above	1.47

*Humble Oil & Refining Company's postings on Gulf Coast Light stop at 35 to 35.9 Its price on all crudes above 35 to $1.37 per barrel.

Magnolia Petroleum Company's postings stop at 31 to 31.9.

MARKHAM

The Texas Company

All grades	1.00

LULING

All grades	1.00

PANHANDLE

GRAY COUNTY

(Humble Oil & Refining Company, Magnolia Petroleum Company, Gulf Pipe Line Company and Sinclair Pipe Line Company).

Below 29 gravity	.68
29 to 29.9 gravity	.75
30 to 30.9 gravity	.82
31 to 31.9 gravity	.89
32 to 32.9 gravity	.96
33 to 33.9 gravity	1.01
34 to 34.9 gravity	1.06
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.16
37 to 37.9 gravity	1.21
38 to 38.9 gravity	1.26
39 to 39.9 gravity	1.31
40 to 40.9 gravity	1.36

CALIFORNIA CRUDE OIL PRICES AT THE WELL

Following are the current prices offered by Standard Oil Company for crude oil at the well: (Price per barrel of 42 gallons in fields indicated)

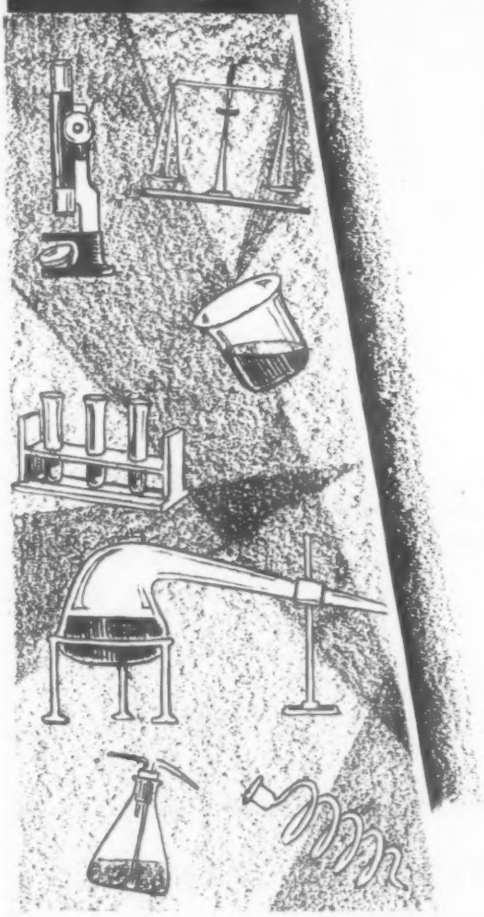
Gravity	Signal Hill	Alamitos Hts Seal Beach	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Torrance	Richfield	Whittier La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler
14-14.9	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .50	$ .75	$ .75	$ .75	$ .75	$ .75
15-15.9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.50	.75	.75	.75	.75	.75
16-16.9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.50	.75	.75	.75	.75	.75
17-17.9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.50	.75	.75	.75	.75	.75
18-18.9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.50	.75	.75	.75	.75	.75
19-19.9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.50	.75	.75	.75	.75	.75
20-20.9	.85	.85	.85	.85	.85	..	.85	.85	.85	.86	.85	..	..	.77	.77	.77	.77	.77
21-21.9	.89	.89	.89	.89	.89	..	.89	.89	.88	.89	.88	.89	..	.79	.79	.79	.79	.79
22-22.9	.93	.93	.93	.93	.93	..	.93	.93	.91	.92	.91	.92	..	.82	.82	.82	.82	.82
23-23.9	.97	.97	.97	.97	.97	..	.97	.97	..	.95	.94	.95	..	.86	.86	.86	.85	.85
24-24.9	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	..	.98	.97	.98	..	.90	.90	.90	.88	.88
25-25.9	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	..	1.01	1.00	1.01	..	.95	.95	.95	.91	.91
26-26.9	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	..	1.04	1.04	1.04	..	1.00	1.00	1.00	.94	.94
27-27.9	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	..	1.07	1.08	1.07	..	1.05	1.05	1.05	.98	.97
28-28.9	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	..	1.10	1.12	1.10	..	1.10	1.10	1.10	1.02	..
29-29.9	1.21	1.21	1.21	1.21	1.21	1.21	..	1.21	..	1.13	1.16	1.15	..	1.16	1.16	1.16	1.06	..
30-30.9	1.25	1.25	1.25	..	1.25	1.25	..	1.25	..	1.16	1.20	1.20	..	1.22	1.22	1.22	1.10	..
31-31.9	1.30	1.30	1.30	..	..	1.30	..	..	..	..	..	1.25	..	1.28	1.28	1.28	1.14	..
32-32.9	1.35	1.35	1.35	..	..	1.35	..	..	..	..	..	1.30	..	1.34	1.34	1.34	1.18	..
33-33.9	..	..	..	..	..	1.41	..	..	..	..	..	1.35	..	1.40	1.40	1.40	1.22	..
34-34.9	..	..	..	..	..	1.47	..	..	..	..	..	1.40	..	..	..	1.46	1.26	..
35-35.9	..	..	..	..	..	1.53	..	..	..	..	..	1.45	..	..	..	..	1.30	..
36-36.9	..	..	..	..	..	1.59	..	..	..	..	..	1.50	..	..	..	..	..	..
37-37.9	..	..	..	..	..	1.65	..	..	..	..	..	1.55	..	..	..	..	..	..
38-38.9	..	..	..	..	..	1.71	..	..	..	..	..	1.60	..	..	..	..	..	..
39-39.9	..	..	..	..	..	1.77	..	..	..	..	..	1.65	..	..	..	..	..	..
40-40.9	..	..	..	..	..	1.83	..	..	..	..	..	..	..	..	..	..	..	..
41-41.9	..	..	..	..	..	1.89	..	..	..	..	..	..	..	..	..	..	..	..
42-42.9	..	..	..	..	..	1.95	..	..	..	..	..	..	..	..	..	..	..	..

THE OFFICIAL OIL DOCTOR *plus* "PETRECO"

Operators who have availed themselves of the services of the Official Oil Doctor have found that this action on their part has paid dividends far beyond expectations.

The Oil Doctor is a specialist on crude oil emulsions. With his staff of petroleum engineers, his complete equipped laboratory, physical and financial facilities, he has proved capable of solving the most intricate and stubborn "cut oil" problems encountered in practically any field.

If your crude production is wet, ask the Oil Doctor for dependable advice. No obligation is incurred by such action. Profitable results are assured, however.



PETROLEUM RECTIFYING COMPANY of CALIFORNIA

Security Title Insurance Bldg. Los Angeles, Calif.

Petroleum Bldg. Houston, Texas

	Dec. 26 1928
41 to 41.9 gravity	1.41
42 to 42.9 gravity	1.46
43 to 43.9 gravity	1.51
44 and above	1.56

WHEELER COUNTY
(Humble Oil and Refining Company and Magnolia Petroleum Company)

Below 30 gravity	.65
30 to 30.9 gravity	.72
31 to 31.9 gravity	.79
32 to 32.9 gravity	.86
33 to 33.9 gravity	.91
34 to 34.9 gravity	.96
35 to 35.9 gravity	1.01
36 to 36.9 gravity	1.06
37 to 37.9 gravity	1.11
38 to 38.9 gravity	1.16
39 to 39.9 gravity	1.21
40 to 40.9 gravity	1.26
41 to 41.9 gravity	1.31
42 to 42.9 gravity	1.36
43 to 43.9 gravity	1.41
44 and above	1.46

CARSON-HUTCHINSON COUNTIES
(Humble Oil and Refining Company, Magnolia Petroleum Company and Gulf Pipe Line Company)

Below 32 gravity	.69
32 to 32.9 gravity	.76
33 to 33.9 gravity	.81
34 to 34.9 gravity	.86
35 to 35.9 gravity	.91
36 to 36.9 gravity	.96
37 to 37.9 gravity	1.01
38 to 38.9 gravity	1.06
39 to 39.9 gravity	1.11
40 to 40.9 gravity	1.16
41 to 41.9 gravity	1.21
42 to 42.9 gravity	1.26
43 to 43.9 gravity	1.31
44 and above	1.36

WEST TEXAS
(Humble, Gulf, Magnolia, The Marland Company and Southern Crude Oil Purchasing Company)*

Crane-Upton, Crockett, Pecos and Winkler Counties, all grades	.65

*Gulf does not post in Winkler County; Magnolia posts in Crane, Upton and Winkler Counties and that part of Glasscock not included in the Chalk field. The Marland Company posts only in Crane, Upton and Crockett Counties; Southern posts only in Crane, Upton and Winkler Counties.

(Magnolia Petroleum Company)

Mitchell County	$ .80
Howard-Glasscock County (shallow)	.80
Howard-Glasscock County (deep)	.65

Col-Tex Refining Company

Howard and Mitchell Counties	$ .80

WYOMING-MONTANA
Wyoming

Byron	1.33
Ferris	1.60
Elk Basin	1.48
Grass Creek	1.48
Rock Creek	1.33
Lost Soldier	.95
Lance Creek	1.48
Mule Creek	1.10
Notches	.65
Big Muddy	1.33
Osage	1.33
Hamilton Dome	.85
Pilot Butte	1.75
Torchlight-Greybull	1.33
Lander	.80
Simpson Ridge	.80
Rex Lake	1.10
South Casper Creek-Poison Spider	1.00

Salt Creek
Midwest Refining Company

29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 and above	1.30

MONTANA

Sunburst	$1.65
Cat Creek	1.33
Lake Basin	2.20

	Dec. 26 1928
NEW MEXICO	
Artesia	1.08
Hogback	1.38
CANADA	
Oil Springs	2.07
Petrolia	2.00

NORTH LOUISIANA
(The Texas Company)

24 to 24.9 gravity	.76
25 to 25.9 gravity	.81
26 to 26.9 gravity	.86
27 to 27.9 gravity	.91
28 to 28.9 gravity	.96
29 to 29.9 gravity	1.01
30 to 30.9 gravity	1.06
31 to 31.9 gravity	1.11
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.19
34 to 34.9 gravity	1.22
35 to 35.9 gravity	1.25
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.31
38 to 38.9 gravity	1.34
39 to 39.9 gravity	1.37
40 to 40.9 gravity	1.40
41 to 41.9 gravity	1.43
42 to 42.9 gravity	1.46
43 to 43.9 gravity	1.49
44 to 44.9 gravity	1.52
45 to 45.9 gravity	1.55
46 to 46.9 gravity	1.58
47 to 47.9 gravity	1.61
48 to 48.9 gravity	1.64
49 to 49.9 gravity	1.67
50 to 50.9 gravity	1.70
51 to 51.9 gravity	1.73
52 and above	1.76

LOUISIANA-ARKANSAS
Homer, Haynesville, Caddo, El Dorado, De Soto and Crichton and Cotton Valley*
(Atlantic Oil Producing Company, Standard of Louisiana, Magnolia Petroleum Company and The Texas Company).

	Dec. 1928
27 to 27.9 gravity	.84
28 to 28.9 gravity	.88
29 to 29.9 gravity	.93
30 to 30.9 gravity	1.02
31 to 31.9 gravity	1.07
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.21
34 to 34.9 gravity	1.25
35 to 35.9 gravity	1.30
36 to 36.9 gravity	1.35
37 to 37.9 gravity	1.41
38 to 38.9 gravity	1.46
39 to 39.9 gravity	1.51
40 to 40.9 gravity	1.56
41 to 41.9 gravity	1.61
42 to 42.9 gravity	1.66
43 to 43.9 gravity	1.71
44 gravity and above	1.76

*Shreveport-Eldorado's postings stop at above 40 gravity.

**Below 36 gravity, the posting on Cotton Valley is 75 cents. From 36 to 52 and above the regular gravity schedule is followed.

STEPHENS
(All Companies)

Below 28 gravity	.75
28 to 28.9 gravity	.79
29 to 29.9 gravity	.83
30 to 30.9 gravity	.87
31 to 31.9 gravity	.91
32 gravity and above	.95

SMACKOVER
(All Companies)

Below 24 gravity	.75
24 and above	.90
Bellevue	1.25
Jennings	1.15
Vinton	1.30
Edgerly	1.30
Starks Dome	1.30
Urania	.85
Calion	.75

IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

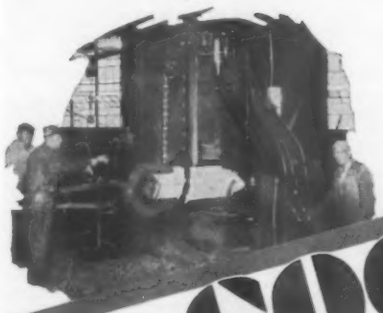
American Petroleum Institute Figures (Barrels of 42 gallons)

	Week Ended Dec. 15	Week Ended Dec. 8
AT ATLANTIC COAST PORTS—		
Baltimore	.....	118,000
Boston	141,000	70,000
New York	908,000	1,199,000
Philadelphia	228,000	250,000
Others	.....	65,000
Total	1,277,000	1,702,000
Daily Average	182,428	243,143
AT GULF COAST PORTS—		
Galveston District	.....	.....
New Orleans and Baton Rouge	364,000	293,000
Port Arthur and Sabine District	.....	.....
Tampa	.....	.....
Total	364,000	293,000
Daily Average	52,000	41,857
AT ALL UNITED STATES PORTS—		
Total	1,641,000	1,995,000
Daily Average	234,428	285,000
Daily Average Four Weeks Ended	274,678	272,750

RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

American Petroleum Institute Figures (Barrels of 42 gallons)

	Week Ended Dec. 15	Week Ended Dec. 8
AT ATLANTIC COAST PORTS—		
Baltimore	74,000	.....
Boston	.....	.....
New York	78,000	318,000
Philadelphia	.....	231,000
Others	.....	.....
Total	152,000	549,000
Daily Average	21,714	78,429
AT GULF COAST PORTS—Total	75,000	.....
Daily Average	10,714	.....
TOTAL—ATLANTIC AND GULF COAST PORTS	227,000	549,000
Daily Average	32,428	78,429
Daily Average Four Weeks Ended	62,607	78,214
Distribution of Total California Oil Receipts is as follows:		
Crude	74,000	.....
Gasoline	153,000	413,000
Gas Oil	.....	78,000
Lubricants	.....	58,000
Total	227,000	549,000



GOOD STEEL MAKES GOOD TOOLS

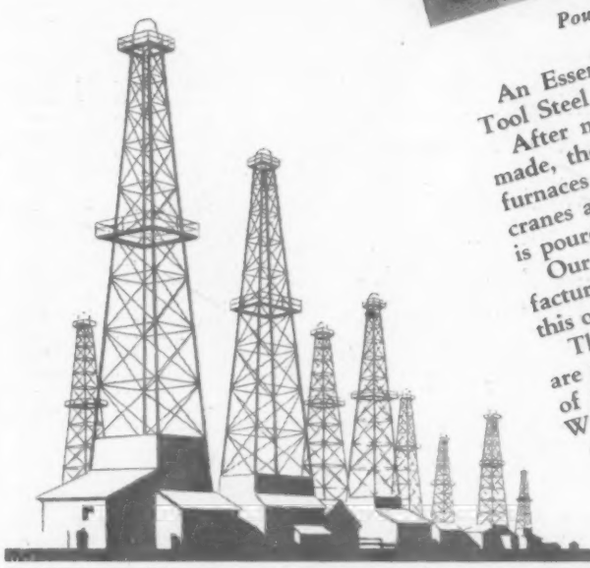
Pouring Steel from the Ladle into Moulds.

"A Story of Steel and Oil" is a historical sketch of the Petroleum Industry. Write for your copy today.

An Essential Factor in the Making of Asco Well Bit Tool Steel for Oil and Gas Well Tools.

After numerous chemical and physical tests have been made, the steel is tapped from the back of open hearth furnaces into giant ladles which are picked up by huge cranes and moved to the pouring platform where the steel is poured into moulds.

Our metallurgists, with years of experience in the manufacture of steel for oil and gas well tools carefully watch this operation to assure uniformity in the steel at this stage. The results obtained by using Asco Well Bit Tool Steel are reflected in the extreme care taken in the manufacture of the best steel that can be produced for Oil and Gas Well Tools.



THE ANDREWS STEEL CO.
NEWPORT KENTUCKY

Say you saw it in The OIL WEEKLY

COMPLETIONS

(Continued from page 62)

EASTERN STATES

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
BRADFORD FIELD—		
South Penn Oil Co., Hooker 29	2	....
Bingham-Satterfield 147	3	....
Bingham 570, tr 2	4	....
Bingham 576, tr 12	7	....
Bingham 576, tr 13	7	....
Bingham 439, tr 118	7	....
Bingham 405, tr 4	3	....
Bingham 390, tr 1	5	....
Bingham 196, tr 1	7	....
Brooks 15	2	....
Melvin 253	2	....
Mellvin 254	2	....
Mellvin 255	2	....
Whipple 27	2	....
H. E. Smith 177	2	....
Mix Creek Oil Co., Mix Creek 47	*	....
Mix Creek 48	*	....
Mix Creek 49	*	....
Mix Creek 50	3	....
C. A. Duke, D. C. & B., tr 17	7	....
L. G. Dana, Tyler 1	7	....
Dana & Dana, Dana 1	7	....
Kinley 1	4	....
R. O. Landers & Co., Landers 8	5	....
McKean Trust Co., Bingham 386, tr 42	3	....
Bingham 386, tr 43	7	....
Gridiron Oil Co., Duke 20	5	....
Hazlewood Oil Co., Lt 23, tr 111	2	....
Lt 23, tr 112	2	....
Bliss Oil Co., Burns 2	3	....
N. V. V. Fanchot, Rounds 22	2	....
W. J. Healy & Co., Stinson 6	2	....
Stinson 7	*	....
Stinson 8	*	....
Stinson 9	*	....
Davis Oil Co., Burns 14	*	....
Davis Oil Co., Burns 15	4	....
Schoperle Bros., Duke 3	2	....
Schoff Bros., Schoff 6	4	....
W. C. Kennedy Co., Kennedy 69	3	....
Kennedy 70	4	....
Kennedy 71	3	....
North Branch Oil Co., North Branch 8	4	....
D. J. Moody, Moody 32	3	....
Pressure Oil Co., Howard 16	4	....
T. B. Martin, Borden 2	5	....
BUTLER COUNTY—		
Letthold & Co., Humes 5	4	....
Hilliard & Co., Meals 14	3	....
Jewell & Co., Logan 1	2	....
Pyle & Co., Riper 1	2	....
CLARION COUNTY—		
S. B. Lewis & Co., Coldheep 1	¶1	....
H. C. Weaver, Ginkel 3	¶1	....
Bream & Co., Collear 16	¶1	....
Short & Co., Strotman 1	¶1	....
Carroll & Co., Groff & Co. 1	*	....
CENTER-MIDDLE FIELD—		
Wright & Gibson, Lt 8, tr 47	7	....
Perry Oil Co., Lt 106, tr 12	3	....
Perry 1	2	....
J. C. Blair & Co., Lt 298, tr 4	4	....
Rocky Grove Oil Co., Brugman 20	2	....
Sylvania Corp., Kaul 27	2	....
Culbertson Oil Co., Lt 109, tr 20	*	....
VENANGO COUNTY—		
Mercer Oil Co., Wright 3	2	....
Oil City National Bank, Foster 16	2	....
Sweetapple & Co., Sweetapple 10	2	....
Burch & Co., Potter 103	2	....
S. Y. Ramage, Stiles 75	2	....
Stiles 76	2	....
S. Y. Ramage Jr., Henderson 48	2	....
G. A. Eakin, McKee 25	2	....
Franklin Trust Co., Witherup 51	2	....
Moyer Bros., Moyer 108	2	....
McClamont & Co., McClamont 1	2	....
GREENE COUNTY—		
H. D. Freeland & Co., Freeland 1	¶1½	....
Carnegie Natural Gas Co., Lemley 2	¶2	....
Carnegie Natural Gas Co., Fox 1	¶2	....
Sutton & Mong, Phillips 3	¶1½	....
Manufacturers L. & H. Co., Champney 1	¶2	....
ALLEGHENY COUNTY—		
Neuhart & Pinkerton, Pinkerton 1	3	....
Duff City Gas Co., Booker 2	*	....

NEW YORK

Company, Well and Location	Initial Production Bbls.	Depth
ALLEGANY COUNTY—		
J. K. Cochran, Allen 15	5	....
Allen 16	5	....
Allen 17	5	....
Allen 18	5	....
Bradley Producing Corp., Bradley 26	5	....
Bradley 27	5	....
Bradley 28	5	....
Bradley 29	5	....
J. A. Bucher, Bucher 3	2	....
Bucher 4	2	....
Sepany Oil Co., Zaph 6	15	....
Zaph 7	7	....
N. V. V. Franchot Brandel 20	8	....
Brandel 21	5	....
F. H. Stephan, Stephan 2	7	....
Stephan 3	2	....
Penn Petroleum Co., Fee 1	2	....
Fee 2	2	....
Fee 3	2	....
Fee 4	2	....
Phillips & Howard, Howard & Co. 2	4	....
Howard & Co. 3	4	....
E. G. Stephan & Co., Kurtzholt 2	3	....
Pure Penn Oil Co., Kinley 4	3	....
McDonald Heirs, McDonald 2	4	....
Martin Bros., Martin 3	3	....

WEST VIRGINIA

Company, Well and Location	Initial Production Bbls.	Depth
RITCHIE COUNTY—		
T. J. Garrison, Stanley 1	¶1	....
Leo Weaver & Co., Layfield 1	¶½	....
South Penn Oil Co., Ritchie Mines 71	5	....
C. D. Burk, West Virginia tract 17	7	....
GILMER COUNTY—		
South Penn Oil Co., Goff 2	20	....
F. G. Bish, Stalnaker 1	¶1¼	....
ROANE COUNTY—		
United Fuel Gas Co., Keene 1	¶1¾	....
Douglass Bros., Sarver 1	¶1½	....
TYLER COUNTY—		
Otis Hadley & Co., Loneberger 1	¶½	....
S. J. McIntyre, McIntyre 1	¶½	....
JACKSON COUNTY—		
L. T. Parsons Oil & Gas Co., Dr. Casto 1	¶1½	....
United Fuel Gas Co., Cooper 1	¶1¼	....
KANAWHA COUNTY—		
United Fuel Gas Co., King Land Co. 1	96	....
S. H. Hall & Co., Strickin 1	¶½	....
WIRT COUNTY—		
W. C. Patterson, Vernon-Donoho 36	*	....
Liberty Supply Co., Breckner 13	*	....
LOGAN COUNTY—		
Ohio Fuel Oil Co., McDonald 1	¶1½	....
MARSHALL COUNTY—		
Manufacturers L. & H. Co., Murphy 1	¶2¼	....
WETZEL COUNTY—		
Annex Oil Co., Spragg 1	¶2	....
BOONE COUNTY—		
United Fuel Gas Co., Horde Coal & Mining 1	¶1½	....
CALHOUN COUNTY—		
Martin Crowley, Sturms 5	¶1½	....
PLEASANTS COUNTY—		
Dinsmoor & Co., Eddy 1	*	....
MARION COUNTY—		
Clifton Oil Co., Snyder-Mertz 1	*	....

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
NOBLE COUNTY—		
Mercer Oil & Gas Co., Crum 5	1	218
Crum 6	2	225
Bell Oil & Gas Co., Wilson 2	¶¼	1007
Thurman Spriggs & Co., Ayres 1	¶¼	....
B. E. Robertson, Walker 2	5	....
Francis Sailing & Co., Brotton 6	¶¼	1203
MORGAN COUNTY—		
Penn Oil & Gas Co., Mendenhall 3	¶1	932
Kemrow Co., Mosier 1	¶¼	1535
Bauman & Co., Hilaman 27	¶½	1483
White 1	¶¼	1650
Ohio Fuel Gas Co., Carr 1	¶¼	1518
WASHINGTON COUNTY—		
Etnaville Oil & Gas Co., Hanlon 7	2	1253
William Huntsman, King 1	¶¼	....
Chas. Fickison & Co., Schramm 5	*	....
Turney & Co., Leasure 14	10	488

CENTRAL OHIO

Company, Well and Location	Initial Production Bbls.	Depth
LICKING COUNTY—		
Guy Shaffer, Chaney 13	8	700
Ralph Bros., Inc., Parr 4	3	741
Everette Gas Co., Claypool 10	12	2989
Hope Cons. & Ref. Co., Burrier 1	30	....
ATHENS COUNTY—		
Fox & Mosure, Bean 5	1	120
Charles Fox, Goddard 2	*	224
Gross & Co., Athens State Hospital 9	*	1150
Bailey Oil & Gas Co., Wells 3	¶½	1577
Logan Gas Co., Tedrow 4	*	1651
Ohio Fuel Gas Co., Walker 2	¶¼	1594
GUERNSEY COUNTY—		
Blackstone & Co., Rallston Heirs 2	20	3500
Ferguson & McCullough, Craig 1	10	3531
Gordon Oil Co., Rose 1	¶4	470
Kemrow Co., Kochera 2	¶¼	855
KNOX COUNTY—		
Ohio Fuel Gas Co., Reed 3	¶2¼	....
Preston Oil Co,. Beatty 1	¶½ -10	3115
Upham Gas Co., Dowds 1	*	2421
MUSKINGUM COUNTY—		
Pure Oil Co., Crawford 4	*	2912
Hyver Bros. 5	127	2915
ASHLAND COUNTY—		
Robison & Co., Donelson 5	20	....
Miller & Co., Smith 4	30	....
MEIGS COUNTY—		
Pure Oil Co., Ham 2	5	1850
Sutton Bros. Crouser 2	2	1642
HOCKING COUNTY—		
Squire Northern Dev. Co., Bradley-Cobb 18	*	3385
Logan Gas Co., Harsch 1	*	2649
PERRY COUNTY—		
Werhle Oil & Gas Co., Wilson 4	60	3391
WAYNE COUNTY—		
Logan Gas Co., Tschantz 2	¶½	....
GALLIA COUNTY—		
Atha Drilling Co., Ramsey-Lane 1	¶½	1688
CUYAHOGA COUNTY—		
Goff Bros. Belden 1	*	....

NORTHWESTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
ALLEN COUNTY—		
Neely & Nolden, Bassett-Marshall 1	10	1365
SENECA COUNTY—		
Feasel & Co., Lynch 1	*	1570

KENTUCKY

Company, Well and Location	Initial Production Bbls.	Depth
ALLEN COUNTY—		
E. D. Defenbaugh, Beam 1	25	253
S. T. Strumm & Co., Stovall 2	1	307
Rehr & Ogle, Grubbs 17	*	....
DAVIESS COUNTY—		
Daly & Lowman, Burton 2	60	....
Wade & Moore, Hoover 1	25	....
Ray Young & Co., Feldpausch 2	30	....
OHIO COUNTY—		
Wood Oil Co., Mattox 5	75	....
Mattox 6	75	....
J. C. Ellis, Gossett 9	50	....
Cundiff 6	50	....
Cumberland Petroleum Co., Hamilton 11	75	....
Snowden-McSweeney Co., Howard Heirs 11	60	420
Ada Kelley 7	30	....
French, Carpenter & Co., Whittaker 4	25	....
Whittaker 5	*	....
Chester Oil Co., Brandon 2	15	....
Ohio Oil Co., Patton 3	10	466
Creek Drilling Co., Howard 1	*	604
H. B. Bastrus, Coleman 4	*	605
Lincoln Oil Prod. Co., Davison 1	*	....
H. L. Miller & Co., Oller 1	*	....
Monson 1	*	....
Bigler & Becker, Patton 1	10	585

MICHIGAN

Company, Well and Location	Initial Production Bbls.	Depth
MUSKEGON COUNTY—		
Paramount Oil Co., Reeths 1,	¶5-250	2067
Shoup Oil & Gas Co., Shoup 3	¶10	2045
Consolidated Oil Co., Plunkett 1	¶7	1997
Maire-Caswell-Kidder, Shuler 1	300	2058
Bark & Pack, Fender 1	100	1704
Eagle Oil Corp., Damm 1	*	2135
Northern Oil & Gas Co., Curtis 1	*	2086
OTTAWA COUNTY—		
Spring Lake Oil Synd., Edward Voss 1	*	1700

Parkersburg

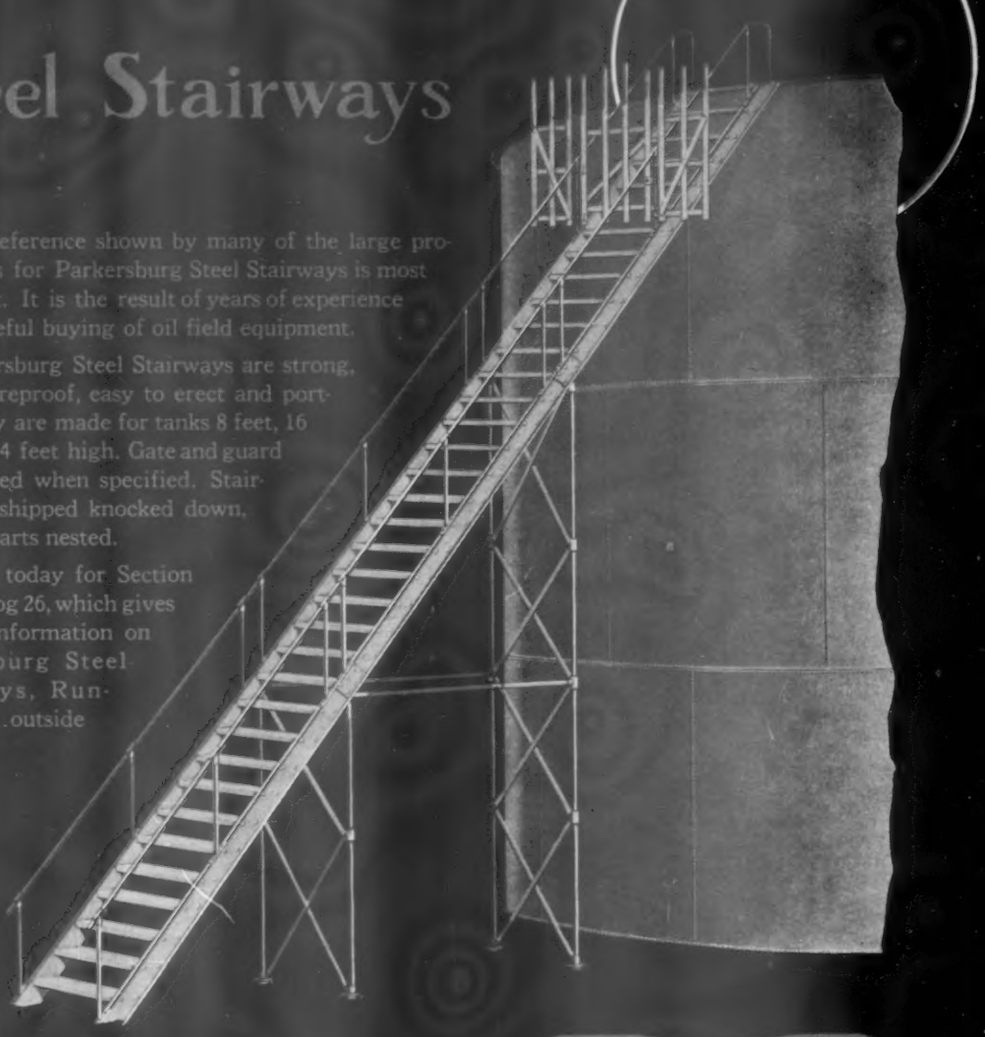
HAS SERVED THE OIL FIELDS OF THE WORLD FOR THIRTY-ONE YEARS

Steel Stairways

THE preference shown by many of the large producers for Parkersburg Steel Stairways is most significant. It is the result of years of experience in the careful buying of oil field equipment.

Parkersburg Steel Stairways are strong, entirely fireproof, easy to erect and portable. They are made for tanks 8 feet, 16 feet and 24 feet high. Gate and guard are supplied when specified. Stairways are shipped knocked down, with the parts nested.

Write today for Section "S," Catalog 26, which gives detailed information on Parkersburg Steel Stairways, Runways and outside Ladders.



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- Steel Derricks & Steel Crown Blocks ■
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- Portable Drilling Machines (Wood & All-Steel) ■
- Steel Wheels ■
- Bolted Steel Tanks ■
- All-Steel Standard Rigs ■
- Miscellaneous Drilling Equipment ■

Check the equipment in which you are interested, tear out and return this page, with your name and address, to us, and we will send you complete information on the items checked.

The
PARKERSBURG RIG & REEL COMPANY

Executive Offices & Main Plant, Parkersburg, W. Va., U. S. A.
Sales Offices Maintained and Stocks Carried in Every Producing Field

PARKERSBURG EQUIPMENT THE STANDARD FOR COMPARISON THE WORLD OVER

INDIANA

Company, well and Location	Initial Production Bbls.	Depth
GIBSON COUNTY—		
William Bell & Co., Thompson 3 ..	30	1585
VIGO COUNTY—		
Siosi Oil Corp., Thomas 1	30	2223
SULLIVAN COUNTY—		
J. F. Bolinger & Co., Harris 5	4	2360

ILLINOIS

CRAWFORD COUNTY—		
Dinsmoor Oil Co., Stentz 3	1	1070
M. Phelan & Co., Fortner 6	*	1020
Farnsworth & Co., Miller 2	*	....
WABASH COUNTY—		
Highland Oil & Gas Co., Mullinax 2	20	1568

ARKANSAS

UNION COUNTY—		
Imperial O. & G. Co., Goodwin 2, 26-17-16, wo	*	3139
Magnolia, B. K. Gregory 1, 15-17-14	¶40	2823
Skelly Oil Co., Kelly 1, 9-17-14	¶40	2830

SOUTH LOUISIANA

EDGERLY—		
Green Oil Co., Moore 9, wo.....	20	3215
C. M. Crotty, Lillard 13, wo.....	10	2340
EVANGELINE—		
Gulf, Leckelt et al 2.....	*	4785
Cranfill & Reynolds, Donnely 1....	*	4025
Cline, Smith & Cline, Conklin 8..	30	1620
LOCKPORT—		
Vacuum-Gulf, Miller 21	800	4400
STARKS—		
Gulf, Lutcher & Moore 13.....	*	3940
SULPHUR—		
Union Sulphur Co., Fee 731.....1680		4850

TEXAS

TEXAS GULF COAST

BATSON—		
Paraffine Oil Co., Paraffine 79.....	2	1150
BIG CREEK—		
Gulf, Davis 42	250	3900
Davis 50	290	3675
BLUE RIDGE—		
Gulf, Invincible Oil Co. 4, wo....1950		3375
Watts Bros. Oil Co., Blakely 9....	*	4495
Navarro Oil Co., Robinson A-8....	*	3026
GOOSE CREEK—		
Humble, Hughes 6, wo	8	2040
Powell Oil Co., Bryan 6.....	*	3275
HULL—		
Republic Prod. Co. Dolbear 96, wo	20	2170
The Texas Co., Hannah Fee 5, wo	*	3370
PIERCE JUNCTION—		
Gulf, E. R. Taylor et al 26.....	*	4200
Moody Corp., Whitehead B-3	120	4660
Rio Bravo., Settegast A-11 4000		4625
SARATOGA—		
Rio Bravo, Teel 28.....	*	2350
Weldon Oil Co., Hooks 9, wo....	20	1270
SOUR LAKE—		
Lake View Oil Co., Hardin 59....	8	955
SOUTH LIBERTY—		
Sun Oil Co., Mitchell 23.....1500		875
Mitchell 18	25	1005
Mitchell 17 1000		890
Gulf, Wm. Chambers Fee 3.....	130	830

TEXAS PANHANDLE

GRAY COUNTY—		
Gulf Prod. Co., S. W. McLarty 1..	25	2551
Lefors Pet. Co., Shaw 3	*	2750
Magnolia Pet. Co., Archer 2	30	3310
J. B. Bowers 3	20	2970
The Texas Co., B. Bull 1, ...	60	2816
H. M. Davis 3	175	3210
HUTCHINSON COUNTY—		
Devonian Oil Co., Johnson 9	45	2895
WHEELER COUNTY—		
Hal Vaughan et al, Woodley 1-B..	¶78	1952

CENTRAL WEST TEXAS

BROWN COUNTY—		
Burris et al Newton 10	20	1217
Crown Pet. Co., McCulley 1	¶1½	1715
Humble O. & R. Co., Byler 7	25	1332
Kerr et al, Hale 2	*	473
Kingwood Oil Corp., Lehman 1 ...	*	2767
Milham Corp., Rosser 8	*	1841
Prairie O. & G. Co., Hargrove 1 ..	20	1285
CALLAHAN COUNTY—		
Reiter-Foster Oil Corp., Hatchett 9	20	350
COLEMAN COUNTY—		
Amerada & Ross Drilling Co., Hays 1	*	1155
Byrd & Goldston, Moody 4	30	1860
Humphreys Bros., et al, Matthews 3	30	1867
Kenwood Oil Corp., Ward 2	*	2501
Sterling Oil Co. & Ross, Weir 1 ..¶3½		2257
Texas Prod. Co., Overall 1	*	2182
EASTLAND COUNTY—		
Bennett & Smith, Cade 1	*	1355
Garrett & Moore, Dalberry 1	*	1590
Harbin et al, McGee 1, ...	10	1304
C. B. McBride et al, Johnson 1	15	2838
PALO PINTO COUNTY—		
Upham Gas Co., Edmondson 6....	*	4058
SHACKELFORD COUNTY—		
Mack Best et al, Walker 1	*	1204
Geo. Callahan et al, Nail 1	*	1585
Earl & Dulls et al, Matthews 2 ...	445	1147
Craig Morton et al, Ezell 1	*	738
Roeser-Pendleton-Marland, Cook 85-A, (Sec. 60)	35	1179
Cook 30-A, (Sec. 61)	50	1250
Tannehill et al, Matthews 4, (Sec. 34)	40	1159
The Texas Co. Sedwick 5	5	559
STEPHENS COUNTY—		
Kleinfelder et al, Compton 1.....	¶4	3907
Phillips Pet. Co., Powell 1	*	2150

NORTH TEXAS

ARCHER COUNTY—		
L. T. Burns et al, Foerster 1	*	1651
Consolidated Oil Co., Wright 1-B ..	*	1459
W. B. Corlett-American Ref. Properties, Cernosek 4	60	1433
Gulf Prod. Co. W. O. Hayter 8-A..	*	1444
L. F. Wilson 1-F	*	1554
Madden & Hunt, Richardson 12 ...	40	1304
Panhandle Ref. Co. et al, Prideaux 10-C	4	645
Parsons et al, Williams 1	*	600
F. Payne et al, Parrish 6	*	1630
The Texas Co., Richardson 23	35	1309
BURKBURNETT—		
Magnolia Pet. Co., W. W. Viles 21	*	2130
ELECTRA—		
Bridwell & Heydrick, Burnett 4..	*	1976
Harry Hines et al, Waggoner Bros. 12	35	1395
Ryan Con. Pet. Corp., Nance 11..	120	1383
G. E. Nance 102	65	1401
G. E. Nance 103	240	1380
G. E. Nance 104	10	1401
JACK COUNTY—		
E. W. Walton et al, Moore 1.....	*	925
K-M-A & IOWA PARK—		
Ascot Co., J. L. Jackson 2.....	*	1253
Staley-Wynne & Co., H. O. Case 1	*	2009
K. & K. 6	250	1491
MONTAGUE COUNTY—		
Pure Oil Co., Keck 10-A.....	15	834
THROCKMORTON COUNTY—		
Humble O. & R. Co., Parker 1....	75	3960
WILBARGER COUNTY—		
Fain-McGaha Oil Corp., Waggoner 24-S	400	2440
Waggoner 25-S	400	2445
Lewis Prod. Co., Waggoner 2.....	150	2431
Simms Oil Co., Waggoner 9.....	50	1870
The Texas Co., Waggoner 1-M....	100	2342
Waggoner Ref. Co., Waggoner 3-G	45	2373
Waggoner 15-H	350	2395
YOUNG COUNTY—		
P. F. Gwynn et al, Kunkel 2-C..	55	1163
King Royalty Co., Hawkins 13....	*	540
Kleiner et al, Davis 9	*	585
Nix et al, McDonald 1	*	613
Pennell Oil Co. et al, Cox 1.....	*	612
Riggs & Oliphant, Sweet 1.....	*	600
Willis & Gatewood, Buster 1.....	*	825

WEST TEXAS

HOWARD COUNTY—		
American-Maracaibo Co., Settles 1-C	965	2240
Gulf Prod. Co., H. R. Clay 3	25	1887
LOVING COUNTY—		
Lockhart & Co., R. L. Allen 2....	100	4237
WINKLER COUNTY—		
Amerada Pet. Corp., Cowden 3....2400		2974
Gulf Prod. Co., Hendrick 20.....21,165		2708
Humble O. & R. Co., Hendrick 17 5400		2898
Pure Oil Co., Hendrick 14-C.....1750		2673
Shell Pet. Corp. & Texas Co., Cowden 6-A 2000		2935
Southern Crude & R. A. Westbrook, Ida Hendrick 2-L-T-88 2400		2900
..Hendrick 5-U-T-88 1000		2960
Hendrick 7-U-T-88 1800		2970
Southern & Dixie Oil Co., Hendrick 3-D-2-T-67 1800		2940
Texon Oil & Land Co., Hendrick 6-A 500		3064

Stopping of Gas Losses Through Pipe Leakage

Washington, D. C.—The losses of natural gas through leakage from high-pressure transmission lines, often running into enormous figures, can be eliminated to a great extent by systematic tests of the lines and by the location and repair of leaks, declares the U. S. Bureau of Mines, which has conducted an investigation of the problem, in cooperation with the Natural Gas Department of the American Gas Association.

Obviously, any one style of pipe line construction is not applicable to all of the conditions considered in a system of transmission lines that extends from the gas well to the ultimate consumer. In practice, three common types of joints are used; screwed, rubber-coupled, and welded. The size of the pipe depends upon the quantity of gas that has to be transmitted and is usually two to 20 inches in diameter. In the past screwed joints were used extensively, even on lines of large diameter. However, the difficulty of obtaining tight connections in the screwed joints has limited screwed connections to small field and gathering lines. Rubber coupled and welded joints are used on main lines of six to 20 inches in diameter. Leakage of lines can be minimized by special precaution in constructing rubber coupled lines to have a perfectly smooth connection between the rubber and the pipe and to tighten the bolts properly through the sleeves that hold the rubber in place. However, rubber coupled joints must be inspected regularly and replaced when they begin to deteriorate.

The term "slack," as applied to a pipe line, simply means that the pipe is not laid in the ditch in a straight line but is snaked in the ditch so that the pipe first touches one side and then the other, permitting the line to straighten out as the metal contracts, without straining the metal. In practice a combination of slack and expansion joints is used. As each expansion joint is a potential source of leakage, it is referable to limit the number of expansion joints by providing more slack.

The results of the study made by the Bureau of Mines and the Natural Gas Association show conclusively that after the main joints of a transmission system are installed properly, the largest part of the leakage is from connections and fittings on the lines. A satisfactory method of testing pipe lines for leakage has been devised by the bureau: the laws governing gas leakage have been determined; typical transmission lines have been surveyed; and possible improvements in the construction and operation of transmission lines have been outlined. The economic aspects of preventing leakage have been studied. The results of these investigations are presented in Bureau of Mines Bulletin 265, "Leakage from High Pressure Natural Gas Transmission lines," by E. L. Rawlins and L. D. Wosk. This bulletin may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at a cost of 25 cents.

Wishing each and every one a Prosperous and Happy New Year

Republic Supply Company

General Office, Houston, Texas

PERMITS GRANTED FOR NEW WELLS

WEEKLY COMPARISON OF NEW WELLS

Following is a condensed table giving a comparison of permits or locations made for new wells during the the past year in Kansas, Oklahoma, Arkansas, Louisiana, Texas, California and the Mountain States:

	Week ending Dec. 22	Previous week	Total this month	Total this year	This week last year	This month 1927	Total same date 1927	Year total 1927
Arkansas	6	4	24	331	3	20	325	329
California	19	26	84	1,179	30	131	1,201	1,226
Louisiana	8	11	51	669	11	64	805	812
Kansas	29	6	67	1,024	15	75	944	972
Oklahoma	74	73	302	3,651	42	225	3,632	3,702
Texas	199	199	771	8,165	103	565	8,560	8,665
Mountain States	..	..	..	..	9	9	440	494
Total	335	319	1,299	15,017	213	1,090	15,909	16,149

OKLAHOMA

ALFALFA COUNTY — Washoma Oil Co. No. 1, sw ne, 14-24-11w.

CARTER COUNTY—Simpson & Fell, Dickerson 1, se, 23-1s-3w. Wirt Franklin Petroleum Corp., Carpenter-Morris 4, ne nw sw, 11-2s-3w. Gypsy Oil Co., Morris 5, ne se, 29-2s-3w.

CIMMARON COUNTY — Magnolia Petroleum Co., School Land 1, c se ne, 22-5n-5e CM.

COTTON COUNTY—Shasta Oil Co., Chambers 2, nw sw sw nw, 2-2s-10w.

CREEK COUNTY—Paraffine Oil Co. & Reliance Oil Co., Cumsey 1, ne sw sw, 16-16-12e. Sunray Oil Corp., Froe 3, se nw sw, 35-16-10e. Shaffer Oil & Ref. Co., Fore 3, ne sw sw, 35-16-10e. Love & Meyers et al, Carter 1, nw ne, 15-16-9e. Bengal Oil Co., Tiger 9, sw se se sw, 17-17-7e. O. M. Irelan, Unallotted 5, c nw sw, 11-17-10e. C. G. Tibbens, Jackson 2, (OWDD) nw se sw, 4-18-12e. Holmes et al, Narharkey 1, c sw ne, 24-19-9e.

GRADY COUNTY—Oklahoma Gas Utilities Corp., School 4, nw sw nw, 36-5n-8w.

HUGHES COUNTY—Independence Oil & Gas Co., Harjo 1, ne nw ne, 7-8-9e.

KAY COUNTY—L. Wentz, Preston 1, nw se sw, 32-27-1e.

KIOWA COUNTY—Russell & Sloan et al, Petty 1, sw se, 14-6n-15w. Frank Ketch, Malernee 1, sw se, 11-6n-15w. Thomas Medlin, Frough 1, ne sw, 18-6n-16w. Bridwell et al, Ditmar 1, ne nw nw se, 18-6n-16w. H. M. P. Oil Co., 1, sw ne, 15-6n-17w.

LINCOLN COUNTY—Wheeler & Mote et al, Wolfe 1, nw ne sw, 2-16-5e.

LOGAN COUNTY—Shell Petroleum Corp., Shaffer 1, se nw, 19-19-4w.

MAJOR COUNTY—Wilson et al, No. 1, ne sw, 4-23-16w.

MUSKOGEE COUNTY — C. D. Bradley, Drake 1, sw nw se, 12-14-18e. P. Boyle et al, Russell 1A, cnl ne se, 19-15-16e. H. E. Williams, Lewis 2a, nw sw ne, 17-16-17e.

OKFUSKEE COUNTY — Champlin Oil & Ref. Co., Carter 13, (OWDD) ne se sw, 15-11-11e. Burke-Greis Oil Co., Unallotted 2, (OWDD) sw ne sw, 36-11-9e.

OKLAHOMA COUNTY—Hall & Briscoe, Halmes 1, se cor, 10-11-3w. Indian Territory Illuminating Oil Co., Foster 1, c ne sw, 24-11-3w. Ramsey Petroleum Co., Forston 1, c sw ne, 24-11-3w. Coline Oil Co., Olds 1, c se nw, 24-11-3w.

OKMULGEE COUNTY — Stosbert et al, Nicholas 1, nw sw nw, 30-13-12e. I. M. Levine et al, Holcomb 1, sw nw se, 24-14-12e. L. C. Wentz & Campbell et al, Fish 1, se ne ne, 6-15-12e.

OSAGE COUNTY—Clint Moore Estate No. 1, nw ne, 16-21-9e. Clint Moore Estate No. 6, se nw nw nw, 16-21-9e.

PAWNEE COUNTY — Shaffer Oil & Ref. Co., Brandt 3, cnl nw se, 16-20-6e. Reiter Foster Oil Corp. et al, Watkins 1, c sw se, 5-19-1w. Skelly Oil Co., Payne 1, ne se, 6-17-4e (OWDD).

PONTOTOC COUNTY—Superior Oil Corp., Maulden 3, sw nw nw, 32-5-5e. Louisiana Oil Ref. Co., Perry 19, nw ne, 19-5-8e. Denver Producers & Refiners Corp., Roberts 1, se ne ne, 36-5-4e.

POTTAWATOMIE COUNTY—Mid-Kansas Oil & Gas Co., Gesselman 2, (OWDD) nw sw nw, 25-7-4e. Shaffer O'l & Ref. Co., Cherry 1 (OWDD) ne se se, 23-7-4e. Darbe Petroleum Co., Bedkins 1, se nw, 16-4-4e; Tolon 4, se sw, 30-7-5e. Sinclair Oil & Gas Co., Nesbit 1, ne se nw, 18-7-5e. Magnolia Petroleum Co., Nicholas 2, ne nw, 31-7-5e. Magnolia Petroleum Co., Rooker 1, ne se, 12-8-4e. Sinclair Oil & Gas Co., Bellars 6, se nw ne, 19-8-5e. Pure Oil Co., Urbansky 2, ne sw ne, 19-8-5e. Independent O'l & Gas Co., Harding 3, sw se nw, 18-8-5e. Rush & Baughn, Laster 1, se ne ne, 19-6-4e.

SEMINOLE COUNTY — Indian Territory Illuminating Oil Co., Mathis 1, ne nw sw, 13-5-7e. Magnolia Petroleum Co., Vanbuskirk 4, nw se, 9-8-6e. Amerada Petroleum Corp., Cross 1, ne nw, 24-9-5e. Magnolia Petroleum Co., Gillim 4, sw ne sw, 13-9-5e. Magnolia Petroleum Co., Gillim 3, se ne sw, 13-9-5e. Carter Oil Co. et al, Gillim 3, sw nw se, 13-9-5e. Carter Oil Co. et al, Gillim 2, sw se, 13-9-5e. Magnolia Petroleum Co., Varnum 2, ne sw se, 32-10-6e.

STEPHENS COUNTY — Lone Eagle Oil Co., Simpson 8, sw ne ne se, 34-1s-8w. Connor et al, Worrell 1, csl n½ ne nw, 22-1s-8w. Fisher & Rankin, ne nw sw, 14-1s-8w. Saterwood & Hart, Farrout 2, ne nw, 9-1s-8w. Fossett et al, Smith 1, se sw, 23-1s-9w. Max Westheimer, Martin 2, nw se se, 11-1s-4w. Magnolia Petroleum Co., Rivire 2, se ne nw, 24-1s-4w. Humble Oil & Ref. Co., Peddycourt 6, se ne ne, 25-12-4w.

TULSA COUNTY—William Wood Syndicate, Franklin 5, se sw, 36-19-11e.

WAGONER COUNTY — Chicago Drilling Syndicate, Barnes 1, c nw ne, 13-16-17e.

KANSAS

BARBER COUNTY—Allison & Fitzwilliams Oil Co., Morrisse 1, nw se se, 9-30-12w.

BUTLER COUNTY—Skelly Oil Co., Adams 1, sw cor, 4-26-6e. Wichita Petroleum Co., Orban 2a, se nw ne, 10-26-4e.

CLAY COUNTY—Derby Oil Co. & Skow, McNeil 1, c sw nw, 15-9-4e.

COFFEE COUNTY — Union Gas Co., Wenzler 1, nw sw, 9-22-14e.

COWLEY COUNTY—Benedum & Trees, Smith 6, sw se, 10-31-3e. Trees O'l Co., Mauser 1, c nw ne, 12-32-4e. T. B. Slick, Youle 2, nw cor, 15-32-4e. Independent Oil & Gas Co. & McNabb, State 2, se nw nw, 15-32-4e. J. A. Hull, Kukuk 19, se ne ne, 24-32-4e. T. B. Slick, Youle 1, ne nw nw, 15-34-4e.

ELK COUNTY—Mann et al, Dory 1, sw cor, 6-31-9e. Yingling et al, Craner 1, se sw nw, 10-31-10e. Sherman et al, Armstrong 3, sw nw, 10-31-10e. Tory & Small, Shell 1, nw se, 27-31-10e.

ELLIS COUNTY—Cosby et al, Robben 1, sw nw, 15-14-16e.

GREENWOOD COUNTY—Pryor & Lockhart, Winzler 3, sw se nw, 29-22-13e. C. L. Sheedy, Sharp 1, ne nw ne, 5-24-13e.

MARION COUNTY—Empire Oil & Ref. Co., Blaksley 1, nw ne sw, 30-20-4e.

MORRIS COUNTY — Anderson & Loomis, nw ne se, 15-16-7e.

OSBORNE COUNTY—Empire Oil & Ref. Co., Crist 1, se ne, 30-9-14w.

RUSSELL COUNTY—Stearns & Streeter et al, Gorham 1, (OWDD), sw ne, 17-13-15w. Empire Oil & Ref. Co., Polycyn 1, ne nw se, 31-13-15w.

SEDGWICK COUNTY—Tilly et al, Fitzgerald 1, nw ne, 5-26-1w. O'Hara et al, Townlot 1, ne cor, 18-26-1e. G. L. Ramsey et al, Schuessler 1, sw cor, 1-25-1e. Shawver et al, Reeves 1, se sw se, 19-28-1e. Sullivan et al, Shelby 1 ,nw ne se, 32-29-2e.

SEWARD COUNTY—Seward Oil & Gas Co., Seeley 1, c se, 20-33-33w.

TEXAS

ARCHER COUNTY—Donohoo & Jameson, Wichita Falls, W. L. Andrews 3, 1826 TE&L sur, 150 ft from n and w lines. Frank Parsons, Wichita Falls, W. H. Williams 1, M. L. Swing sur, 150 ft from w and 810 ft from s line. Madden & Hunt, Olney, Texas, J. T. Richardson 13, S. Anderson sur, 300 ft w of No. 12. M. T. McLaughlin et al, Wichita Falls, A. P. Jackson 1, B 133, W. B. Aldridge sur, 150 ft from e and 1658 ft from n line. American Ref. Co. & Corlett & White, Wichita Falls, J. F. Chernosek 5, 2409 TE&L sur, 300 ft w of No. 4. E. J. Stump & Co., Wichita Falls, H. Ford 1, E. H. Fitzgerald sur. J. H. Howell, Electra, W. H. Taylor 1, B 17, Amer. Trib. sur, 150 ft from s and 1200 ft from e line. H. H. Turner, Wichita Falls, J. D. Lyles 3, S 7, Hooper & Wade sur, 150 ft from s and w lines. F. G. Payne et al, Wichita Falls, N. J. Parrish 6, S. P. Ry. sur, 325 ft nw of No. 3. Humble Oil & Ref. Co., Wichita Falls, L. L. Hudson 1, S 83, Harris sur, 450 ft from n and 150 ft from w line. T. Y. Pickett, Wichita Falls, G. Williams 2, J. Hand sur, 750 ft from e and 150 ft from s line. Texas Co., Wichita Falls, J. T. Richardson 20, S. A. R. sur, 257 ft n onf No. 18.

AUSTIN COUNTY — Humble Oil & Ref. Co., Houston, Hardy 2, Wm. Smeathers sur, 350 ft from se and sw line.

BROWN COUNTY—E. H. & F. M. Caldwell, Brownwood, Fee 3, B. 15, KCSL sur, 450 ft w of No. 2. G. P. Mitcheam, Cisco, T. H. Marr 1, E. L. Betts sur, 150 ft from s and e lines. Humble Oil & Ref. Co., Cisco, R. Hickman A28, T. Benson sur, 464 ft s of No. 27. J. S. Morris, Fort Worth, W. D. McCulley 1, Thom sur, 275 ft from n and 150 ft from w line. Humble Oil & Ref. Co., Cisco, J. T. Hodnett A17, J. M. Harris sur, 372 ft s of No. 16. Hammon & Garrett, Wichita Falls, T. B. Starkey 2, J. Armendaris sur, 100 ft n of No. 1. Herring & Anderson et al, Brownwood, E. A. Merritt 1, S 210, J. Redman sur, 426 ft nw of center of se line. Lloyd Oil Corp., Fort Worth, J. R. Collier 13, S 139, W. A. Smith sur, 300 ft w of No. 3. Gore & Brown, Brownwood, W. H. Mays 2, No. 609 J. M. Ross sur, 430 ft from e and 536 ft from n line.

BEXAR COUNTY—Tom Burnam, San Antonio, Brehm 1, P. L. Buquor sur, nw corner.

CALLAHAN COUNTY—Reiter- Foster Oil Corp., Tulsa, Okla., P. G. Hatchett 7, S 24, D&D Asy. sur, 150 ft from e and 413 ft from s line; 16, 1050 ft from w and 876 ft from s line; 3, 150 ft from s and w lines. C. E. Starr et al, Baird, J. C. Jones 1, S 40, D&D Asy. sur, 150 ft from n and w lines. E. V. Richards, Cisco, S. D. Hill 1, S 42, D&D Asy. sur, 150 ft from s and e lines. L. B. Orchard, Fort Worth, E. L. Finley 1, S 12, D&D Asy. sur, 850 ft from e and 450 ft from s line. Ewing Oil Corp., Abilene, J. C. Jones 1, S 40, D&D Asy. sur, 150 ft from s and w lines. Texas Co., Wichita Falls, P. G. Hatchett 13, S 29, D&D Asy. sur, 300 ft w of No. 11. C. B.

Holmes et al, Baird, A. Hickman 2, S 2, S. Morris sur, ne corner. Surf Oil Co., Baird, C. B. Snyder 16, S 4, T&NO sur; 77, T&NO sur; 18, T&NO sur; 19, T&NO sur; 29, T&NO sur; 22, T&NO sur. Moutray Oil Co., Abilene, A. Hickman 31, S 149, BBB&C sur.

COLEMAN COUNTY—Texas Co. Wichita Falls, T. M. Hays 4, S 93, B&S sur, 300 ft e of No. 3. Midwest Exploration Co., Amarillo, E. W. Gill 2, No. 69 E. Mudd sur, east central part of lease. W. P. Head, Dallas, W. E. Gay 1, S 169, P. Hope sur, 150 ft from s and e lines. Forster Bros., Coleman W. C. Sharp 1, S 91, B&S sur, 150 ft from w and 1050 ft from s line. Barnsdall Oil Co., Tulsa, Tholl 1, No. 151, M. Martinez sur, 250 ft from s and w lines. Atlantic, Davies & Urban, Coleman, J. W. Gates 1, S 67, B 36, GH&H sur, 175 ft from s and 200 ft from w line. E. J. Cunningham et al, Coleman, L. P. Jennings 13, No. 94 A. S. Lipscomb sur.

COOKE COUNTY — Bridwell Oil Co., & Grant, Wichita Falls, A. J. Dennis 2, H. Wilkinson sur, 450 ft from s and 150 ft from e line. Thornton & Taubert et al, Wichita Falls, A. J. Dennis 2, J. L. Stephens sur, 736 ft from n and 150 ft from w line. Lesh & McCall, Necona, E. Ball 1, M. Hunt sur, 629 ft from n and 1383 ft from e line. Thornton & Taubert et al, Wichita Falls, A. J. Dennis 1, J. L. Stephens sur, 1018 ft from n and 52 ft from e line. W. L. Griffith, Gainesville, D. B. Wheelock 2, No. 1036 Wm. Teal sur, 150 ft from s and e lines.

CALDWELL COUNTY — Humble Oil & Ref. Co., Houston, J. J. Davis 1, A. Floyd sur, 150 ft from n and 453 ft from w line. J. B. Tiller 2, G. Hinds sur, 150 ft from n and w lines. Gulf Prod. Co., Houston, J. J. Davis 2, A. Floyd sur, 150 ft from s and e lines. Shell Pet. Corp., Luling, F. Tiller 1. G. Hinds sur, 750 ft from e and 150 ft from s line; Wm. Moses 1, A. Floyd sur, 150 ft from s and e lines; 2, 300 ft n of No. 1; R. W. Carter B1, Hinds sur, 150 ft from s and w lines; Wm. Smith 5, A. Floyd sur, 150 ft from n and 325 ft from e lines.

CRANE COUNTY — Gulf Prod. Co., Fort Worth, W. N. Waddell 6, S 12, B B25, 660 ft from n and 1980 ft from e line.

CHAMBERS COUNTY—Rexal Pet. Corp., Houston, Atlantic 1, H. Griffith sur, 23 ft from w and 25 ft from n line. Yount-Lee Oil Co., Beaumont, Chambers 2, Wm. Bloodgood sur, 330 ft from w and 650 ft from n line; Richardson 2, Wm. Bloodgood sur, 110 ft from w and 215 ft from n line.

DUVAL COUNTY—Humble Oil & Ref. Co., Houston, C. W. Hahl 2, No. 250 R. Gunter sur, 300 ft s of No. 1. J. G. Mackay, Hebbronville, J. M. Richardson 2, Sec. 5, 160 ft from n and w lines. Magnolia Pet. Co., Dallas, C. W. Hahl B3, S 61, Rosita Valley sur, 300 ft e of No. 1. Humble Oil & Ref. Co., Houston, Kahler 13, No. 163 sur, 495 ft from e and 165 ft from s line; 12, 1485 ft from s and 165 ft from e line. Sun Oil Co., Beaumont, Yeager-Stroman A 11, No. 5 Las Animas sur, (Webb County) C. J. Davis 2, S 250, GB&CN sur, 150 ft from n and w lines.

DALLAS COUNTY — Jno. Locher, Carrollton, W. Lusk 1, S 1183, J. C. Reed sur, 310 ft from w and 150 ft from s line.

ERATH COUNTY — Pettus, Beard & Goforth, Thurber, J. B. Moring 1, M. Goff sur, 400 ft from n and e lines; J. V. Evatt 1, B 27, J. M. Espinosa sur, 200 ft from s and w lines; W. B. Car 1, B 25, J. M. Espinosa sur, se corner.

EASTLAND COUNTY — F. V. Gordon, Ranger, H. C. Henson 1, E. Finley sur, nw corner. J. M. Gholson al et Ranger, C. V. Fox 1, MLCSL sur, 725 ft from n and 180 ft from e line.

FORT BEND COUNTY — Humble Oil & Ref. Co., Houston, Deatherage 2, E. Alcorn sur, 450 ft from s and 150 ft from e line; M. C. Camp 2, Wm. Stafford sur, 850 ft from s and 450 ft from w line.

FISHER COUNTY—E. I. Thompson, Fort Worth, A. T. Newman 1, S 44, B 1, HT&B sur, 660 ft from e and 1275 ft from s line.

FANNIN COUNTY — Scrivner & Honea, Bonham, J. A. Griffith 1, J. A. Wandle sur, 450 from n and 150 ft from w line.

GRAY COUNTY—Marland Prod. Co., Ponca City, Okla., B. E. Finley 1, S 32, B B2, H&GN sur, 330 ft from n and e lines. Phillips Pet. Corp., Bartlesville, M. H. John 5, S 87,

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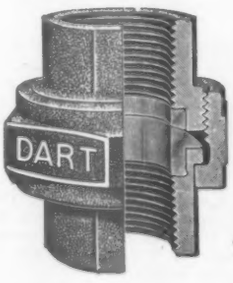

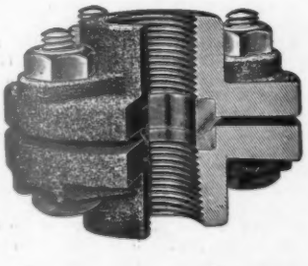

B 3, I&GN sur, 991 ft from w and 330 ft from s line. Sun Oil Co., Dallas, Patton 1, S 61, B B2, H&GN sur, 600 ft from s and 300 ft from w line.

GLASSCOCK COUNTY—R. R. Penn, Dallas, E. S. Hughes 1, S 45, B 30, W&NW sur, center.

HARRIS COUNTY — Rolyat Prod. Co., Humble, Decker 1, Jas. Strange sur, nw corner; 2, ne corner; Cherry 5, B 2, Jas. Strange sur, 15 ft from n and 300 ft from e line; Cherry 6, B 1, Jas. Strange sur, 72 ft from n and 550 ft from e line; Dunman 1, B 14, Jas. Strange sur, 30 ft from n and 20 ft from w line.

HOWARD COUNTY—California Co., Colorado, D. Roberts 2B, S 137, B 29, W&NW sur; D. Roberts 2A, S 137.

HARDIN COUNTY — Paraffine Oil Co., Houston, Knight 44, 340 ft from s and 42 ft from e line.

HUTCHINSON COUNTY — Phillips Pet. Corp., Bartlesville, Okla., J. Pat 2, S 23, B M23, T. C. Ry. sur, 330 ft from n and w lines. Antelope Creek Oil & Gas Co., Amarillo, J. M. Sanford 3, S 82, B 42, H&TC sur, 1520 ft from w and 330 ft from s line. Phillips Pet. Corp., Bartlesville, Okla., Whittenburg 16, S 63, B 46, H&TC sur, 652 ft s of No. 4; H. C. Bret 1, S 23, B M23, T. C. Ry. sur, 330 ft w of center of e line.

JEFFERSON COUNTY — Yount-Lee Oil Co., Beaumont, McFaddin 89, P. Humphreys sur, 555 ft from w and 672 ft from n line. Gaddy Oil Co., Beaumont, O. Sterling 1, No. 283 HT&B sur, 210 ft e of center of w line. Yount-Lee Oil Co., Beaumont, McFaddin 88, P. Humphreys sur, 550 ft from w and 365 ft from n line; Gladys 73, B 98, J. A. Veatch sur, 45 ft from w and 40 ft from n line.

JACK COUNTY—Denney & Andrews, Putnam, J. W. Carter 1, No. 2730 sur, 150 ft from n and 400 ft from w line. Walton & Ratblatt, Graham, W. C. Cantrell 2, L. White sur, 450 ft from w and 150 ft from s line.

LIBERTY COUNTY — Harrison Oil Co., Houston, Quintette 3, S 125, H&TC sur, ne corner. Gulf Prod. Co., Houston Phoenix 92, J. Devore sur, 250 n of No. 32; Wm. Chambers 8, M. G. White sur, 50 ft from s and e lines.

MENARD COUNTY—C. G. Cromwell et al, Big Lake, F. Wilhelm 1, No. 6 F. Speck sur, center.

MILLS COUNTY—J. E. Whiteside et al, Goldthwaite, J. M. Traylor 1, S 6, B 7, HT&B sur, se cor of Blk. 7.

NAVARRO COUNTY — A. C. Prod. Co., Wortham, W. E. Bounds 1, Hillhouse-Smith sur, 500 ft from nw and 400 ft from sw line.

PANOLA COUNTY — Magnolia Pet. Co., Dallas, C. G. Steele 15, 200 ft from s and e lines. D. Thomason Drilling Co., Shreveport, La., I. H. Crenshaw 6, B. C. Jordan sur, 1930 ft from n a and 2700 ft from w line; 7, 2130 ft from n and 1500 ft from w line; 8, 1415 ft w of center of e line; 9, se corner; 10, se corner; 11, 1366 ft from w and 938 ft from n line; 12, 800 ft from n and 3090 ft from w line.

RUNNELS COUNTY—Eugene Mays, San Angelo, J. F. Curry 1, B 284, G. Carroll sur, 330 ft w of center of e line

REFUGIO COUNTY—Saxet Gas Company, Corpus Christi, C. Heard 5, Refugio sur, 750 ft from n and 91 ft from w line. Houston Gulf Gas Co., Houston, J. M. O'Brien 4, I, O'Brien sur, south central.

REEVES COUNTY—R. R. Penn, Dallas, E. G. Bowles 1, S 36, B 50, 330 ft from n and e lines.

SHACKELFORD COUNTY—T. G. Shaw, Fort Worth, J. Rice 22, S 20, Bayland Asy. sur, 300 ft ne of No. 15. Morrison & Coleman, Wichita Falls, J. H. Nail 1, Brock sur, 150 ft from n and 1320 ft from w line. Cranfill & Reynolds, Cisco, C. Flippen B2, S 35, B 11, T&P Ry. sur, 710 ft from n and 150 ft from w line. Texas Co., Wichita Falls, A. Hickman 2, S 2, S. Morris sur, (Callahan County); G. E. Waters 5, S 64, Univ. Lands sur, 281 ft from e and 569 ft from s line. Scott & Walker, Albany, L. C. Huskey 6, 568 TE&L sur, 300 ft n of No. 5. A. C. Walker, Albany, E. E. Grathe 2, 567 TE&L sur, 775 ft from n and 150 ft from e line. Roeser & Pendleton, Inc., Fort Worth, W. I. Cook, A12, S 62, E. T. Ry. sur, 1247 ft from n and 220 ft from w line; A31, S 61, E. T. Ry. sur, 150 ft from s and 973 ft from w line. Home Oil & Gas Co., Inc., Albany, K. Fritz 10, 536 TE&L sur, 1398 ft from se and 750 ft from sw line. J. P. Harris, Albany, Littlefield 1, S 7, LAL sur, 150 ft from n and w lines; 2, 300 ft s of No. 1.

STARR COUNTY—Crays & McCardle, San Juan, Hicks 1, Perednal sur, 150 ft from ne and 200 ft from se line.

WICHITA COUNTY—Regal Oil Co., Wichita Falls, N. H. Martin 2, W. R. Eaves sur, 50 ft n of No. 1. C. B. Bailey, Wichita Falls, S. I. Munger 28, WVFL sur, 150 ft se of No. 26. Gibson & Cardwell, Wichita Falls, J. E. Parker 9, B 9, PPCSL sur, 150 ft w of center of e line. Holbrook & Woods, Wichita Falls, Kemp & Kempner 28, B 82, WVFL sur, 50 ft s of No. 25. J. H. Cable et al, Wichita Falls, H. B. Hines 1, S 80, B 11, H&GN sur, 2800 ft from s and 150 ft from e line; 2, 700 ft s of No. 1. Staley, Wynne & Co., Wichita Falls, Kemp & Kempner 9, B 82, WVFL sur, 150 ft from n and e lines. Panhandle Ref. Co., Wichita Falls T. L. Burnett 4, S 2, G. P. Meade sur, 300 ft e of No. 3. Humble Oil & Ref. Co., Wichita Falls, W. Taylor 5, S 81, WVFL sur, 150 ft from s and e lines. Magnolia Pet. Co., Dallas, S. L. George 4, L. B. Talliaferro sur, 660 ft n of No. 3. J. W. Donohue 12, J. W. Robertson sur, 300 ft w of No. 11. Hammon & Garrett, Wichita Falls, T. F. Mitchell 5, J. T. Lewis sur, 750 ft from n and 150 ft from e line; S. H. McCarty 13, W. R. Eaves sur, 750 ft from n and 150 ft from w line. Humble Oil & Ref. Co., Wichita Falls, Taylor 4, WVFL sur, 150 ft from n and e lines. Whitaker & Hamilton, Wichita Falls Hartsook 1, J. English sur, 600 ft from n and 450 ft from w line. Culbertson Co., Wichita Falls, J. & J. Waggoner 57, S 13, BS&F sur, 1195 ft from e and 1295 ft from s line. M. G. & C. Drilling Co., Wichita Falls, E. Crudup 1B, B 10, DCSL sur, 180 ft from n and 160 ft from w line. Staley, Wynne & Co., Wichita Falls, Kemp & Kempner 10, B 82, WVFL sur, 150 ft from s and w lines.

WILBARGER COUNTY—Fain-McGaha Oil Corp., Wichita Falls, W. T. Waggoner 30, S 24, B 4, H&TC sur, 300 ft se of No. 15. Phillips Pet. Corp., Bartlesville, Okla., O. J. Norwood 3, S 18, B4, H&TC sur, 195 ft from s and w lines; Waggoner 3, S 42, B 4, H&TC sur, 220 ft from n and w lines; Waggoner 2, S 43, B 4, H&TC sur, 195 ft from s and w lines. Consolidated Oil Co., Wichita Falls, W. T. Waggoner B1, T. D. Purnell sur, 1148 ft from w and 150 ft from n line; W. T. Waggoner L1, S 49, B 4, H&TC sur, 150 ft s of center of n line; R. Houser 1, W. B. Tatum sur, 150 ft from s and e lines. Fain-McGaha Oil Corp., Wichita Falls, W. T. Waggoner 29, S 24, B 4, H&TC sur, 300 ft e of No. 7; 28, 310 ft ne of No. 23; 27, 300 ft s of No. 23. Archer Drilling Co., Wichita Falls, W. T. Waggoner 1, S 49, B 4, H&TC sur, 150 ft n of center of s line. E. B. Lawson, Tulsa, W. T. Waggoner 15, S 30, B4, H&TC sur, 660 ft from s and 668 ft from e line; W. T. Waggoner 1, S 29, B 4, H&TC sur, 1120 ft from n and e lines. Phillips Pet. Corp., Bartlesville, Okla., W. T. Waggoner 5, S 30, B 4, H&TC sur, 195 ft from n and e lines. C. P. Burton, Wichita Falls, W. T. Waggoner 1, S 7, B 5, H&TC sur, 150 ft from s and w lines.

WEBB COUNTY—Magnolia Pet. Co., Dallas, Benavides 1, No. 660 SK&K sur, 150 ft from s and w lines. Houston Gulf Gas Co., Houston, S. Benavides 1, No. 693 sur, 150 ft from s and w lines. Sun Oil Co., Dallas, Yeager-Stroman 11A, No. 5 Las Animas sur, 300 ft s of No. 10A. Cole Pet. Co., Laredo, R. V. Benavides 66, S 412, B 4, 160 ft from n and 631 ft from e line. O. W. Killam, Laredo, A. M. Bruni 30, B 64, Albercas sur, 957 ft from w and 2572 ft from s line; 31, 1390 ft from w and 2456 ft from s line. Texas Co., Houston, A. M. Bruni 1B, Las Albersas sur, 150 ft from n and w lines.

WHARTON COUNTY — Vacuum Oil Co., Houston, S. T. Taylor 2, S. F. Austin sur, 50 ft from n and w lines. Ferdinand Heine, Jacksonville, V. Kostelnik 5, S. F. Austin sur, 30 ft from w and 500 ft from s line. Gulf Prod. Co., Houston, W. Banker 4, S. F. Austin sur, 250 ft sw of No. 3.

WINKLER COUNTY—Prairie Oil & Gas Co., Ranger, E. W. Cowden 4, S 3, B 12, 330 ft from w and 440 ft from s line. Dixie & Southern Crude Oil Purchasing Co., Wichita Falls, T. G. Hendrick J2, S 9, B 12, 1320 ft from n and 330 ft from e line.

WHEELER COUNTY — Northern Texas Utilities Co., Wichita Falls, Fee 1, S 91, B 7, H&GN sur, center. Lone Star Gas Co., Dallas, T. C. Jones 4, S 1, B 24, H&GN sur, 330 ft from s and e lines; 3, 660 ft from n and w lines. Wischkaemper & Johnson, Shamrock, Fee 2, S 80, B 23, H&GN sur, 160 ft from s and w lines.

WASHINGTON COUNTY — Sun Oil Co., Beaumont, J. Grote 1, J. E. Perry sur, 202 ft from nw and 450 ft from sw line.

YOUNG COUNTY—Robertson Drilling Co., Fort Worth, F. Gilmore 1, YCSL sur, 150 ft from n and 1320 ft from w line. Holbrook & Woods, Wichita Falls, S. E. Watson 6B, B 22, YCSL sur, 300 ft w of No. 5. Butler & McAlister, Olney, R. E. Rogers 1, 166 TE&L sur, 895 ft from w and 150 ft from s line. Riggs & Oliphant, Graham, O. L. Sweet 1, 1488 TE&L sur, 150 ft from n and e lines. L. A. Pearson et al, Wichita Falls, W. E. Whitaker 1, 1585 TE&L sur, 150 ft from s and e lines. M. L. Richards, Wichita Falls, Dick Campbell 1, 1389 TE&L sur, 16 ft from w and 150 ft from s line. L. V. Ulrey, Breckenridge, G. C. Barrett 1, No. 453 sur, 150 ft from n and w lines. W. M. Meredith, Jean, J. A. Simmons 1, 1994 TE&L sur, 950 ft from e and 1050 ft from s line. Kleiner, H-Y Oil Co. & West, Cisco, J. H. Davis 10, 1487 TE&L sur, 300 ft w of No. 9; 9, 300 ft w of No. 8. J. N. Nix, Wichita Falls, W. Riggs 1, 1913 TE&L sur, 150 ft from n and w lines. Willis & Gatewood, Jean, J. A. Buster 1, 1469 TE&L sur, 150 ft from s and w lines. C. A. Pennell et al, Loving, J. R. Cox 1, S Tynes sur, 750 ft from n and 150 ft from e line. Panhandle Ref. Co., Wichita Falls, H. O. Prideaux 11C, A. Rohus sur, 750 ft from w and 150 ft from s line.

ZAPATA COUNTY—O. W. Killam, Laredo, R. Lopez 1, S 113, 1660 ft from n and 1070 ft from e line. C. L. McCaslin, Mirando City, R. Cuellar 1, S 278, 3578 ft from n and 3260 ft from e line.

LOUISIANA

CADDO PARISH—Dixie Oil Co., Inc., Shreveport, La., G. E. Wells B-3, 10-21n-15w, 600 ft n and 250 ft w of se c sw. Dixie Oil Co., Inc., Shreveport, F. M. Hobbs 5, 21-21n-15w, 250 ft n and 250 ft w of se c ne se. D. C. R. Oil Co., Inc., Shreveport, Estate of S. S. Hunter, Inc. 1, 17-19n-14w, 660 ft s and 560 ft e of nw c. Snake Creek Oil Co., Shreveport, Levee Board 1, 9-21n-16w, 400 ft s and 200 ft e of nw c sw nw.

CALCASIEU PARISH — Vinton Pet. Co., Orange, Texas, Matilda Gray 20-Ac. No. 1, 33-10s-12w, 48 ft n and 89 ft w of se c sw ne.

IBERIA PARISH—Gulf Ref. Co. of La., Houston, A. Moresi Co. et al 1, 27-11s-8e, 600 ft s and 150 ft w of ne c se.

UNION PARISH—Interstate Natl. Gas Co., Inc., Monroe, Hodge Fee 1, 4-19n-3e, 1902.4 ft s and 1905.8 ft w of ne c.

WEBSTER PARISH — Bob Elmore, Fort Worth, Texas, Mitchell 1, 31-23n-9w, 660 ft n and 660 ft w of se c.

CALIFORNIA

KERN COUNTY—Gerard and Phillips No. 1, 32-27-29.

KERN RIVER—The Texas Co., No. 4, 14-28-27; No. 8, 14-28-27; No. 11, 14-28-27; Lehman 8, 23-28-27.

KINGS COUNTY—Justice and Ellerby, No. 1, 27-19-19.

LONG BEACH—Richfield Oil Co., Duncan 4, 24-4-13. Woolner Oil Corp., Signal Hill 5, 19-4-12. Traves Drilling Co., Conductor 2, 29-4-12.

LOS ANGELES COUNTY—Rio Grande Oil Co., Osborne 1, 34-2-12.

MIDWAY—Honolulu Consolidated Oil Co., No. 77, 8-32-24.

POTRERO—Jim Pollard, Blinn 1, 28-2-14.

SANTA FE SPRINGS—The Texas Co., Patterson B-13, 6-3-11; Patterson A-14, 6-3-11; Steinly 7, 6-3-11.

SANTA BARBARA COUNTY — Standard Oil Co., Rose-Schyvers 1, (-)-7-35.

SIMI—Shell Co., Marr 1, 31-3-17.

VENTURA—Associated Oil Co., Hartman 12-A, 22-3-23; Hartman 17, 22-3-23..

ARKANSAS

ASHLEY COUNTY—The Texas Co., Keifer 1, nw nw 11-18-4.

JOHNSON COUNTY—Ark. Nat. Gas Corp., J. H. McPherson 1, se se 10-10-24.

UNION COUNTY—Ohio Oil Co., Carroll Heirs 3, se nw 6-17-13; Magna Production Co. & O. W. Estes, El Dorado Realty Co. 2, nw sw 8-17-13; J. S. Rushing, Tr., Gregory 7, nw sw 11-17-14; W. M. Coats, Tr., J. R. Powell 1, sw sw 35-18-15.

Engineering Report Issued on Seminole

Washington, D. C.—A preliminary engineering report on the Seminole oil field has just been published by the U. S. Bureau of Mines, Department of Commerce in cooperation with the State of Oklahoma. This report points out the application of modern air-lift methods in this pool, showing how production was tremendously increased, resulting in an economic loss to the oil industry. It also gives an account of the completion of the first oil well in the Seminole pool, when commercial production was obtained from the Wilcox sand by the Independent Oil and Gas Company. This well was completed in July, 1926, and was the beginning of intensive operations, which resulted in production exceeding transportation and storage facilities by the following November. The pool reached its peak production on February 22, 1927, when the daily average registered 265,000 barrels.

This report presents detailed information concerning the underground structures of the Seminole pool, water encroachment problems and the various methods used for lifting the oil. It also contains a history of the development, its geology, drilling, casing, cementing, mudding and shooting methods; and methods of application and results obtained in the use of natural flow, air-gas lift, swabbing, pumping and repressuring methods. Copies of this report may be obtained from the United States Bureau of Mines, Department of Commerce, Washington, D. C., or from the Petroleum Experiment Station, U. S. Bureau of Mines, Bartlesville, Oklahoma.

Great Falls, Mont.—An intention to drill wells northeast of the main producing area of the Kevin-Sunburst field has been announced by two operators this month. The acreage of Loy Oil Company has been taken over by interests identified with the Ardsley Butte Mining Company in Township 36 north, Ranges 1 and 2 east. A well here, uncompleted by the Loy company, is being operated by a crew which recently took charge. In the same area the Black Gold Petroleum Company is moving in materials for a well to be drilled in Section 30-36n-2e. This is on Barthelote dome, and was the center of interest in the Sweetgrass Hills operations two years ago.

Artesia, N. M. — Midwest Refining Company has made another location on its Farnsworth lease in Lea County, and the well will be drilled immediately. Location is on NW Section 13-26s-36e, and the well will be known at No. 13. The company's No. 19, Section 12-26-37e, is drilling at 3900 feet.

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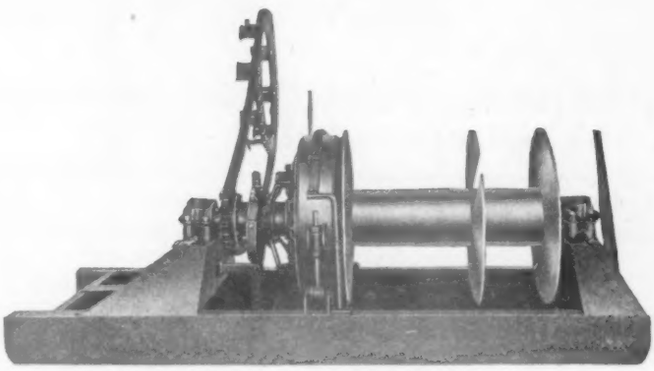

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COFFEYVILLE, KANSAS

Request Bulletin 90

WILDCATS FROM ALL SECTIONS

TEXAS GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
AUSTIN COUNTY—		
Humble, Hardy 1, Raccoon Bend..	*	1224
GOLIAD COUNTY—		
J. E. Alexander, Campbell 1, 1 mi n Goliad	*	1042
McCarson et al, Broyles 1, Goliad townsite	*	1000
LIBERTY COUNTY—		
Big Dome Interests, Finley 1, 2½ mi nw Hardin	*	4335
Humble, Welder 9, S. Dayton	75	3628

AUSTIN COUNTY — Humble's Hardy 1, Raccoon Bend, abn at 1224 ft; Hardy 2, Raccoon Bend, ru; A. Grawunder C-1, Raccoon Bend, dr 1358 ft sand rock; Beal 1, Raccoon Bend, waiting on cem to set at 3340 ft; Bracey B-1, Raccoon Bend, dr 3357 ft sand; Walton 2, Raccoon Bend, dr 1774 ft shale; Grawunder B-1, Raccoon Bend, cleaning out crater; Urban 3, Raccoon Bend, sd 198 ft; J. W. Wilson 1, Raccoon Bend, dk; E. Kearns 2, Raccoon Bend, lcn; E. B. Wilson 2, Raccoon Bend, dk.

BRAZORIA COUNTY—Shell Pet. Corp.'s Allen 5, Allen dome, fsh 4037 ft; Reese 3, Allen dome, sdt at 2040 ft. Myers et al's Davidson 1, Clemens dome, dr 1050 ft gbo. F. A. Bartlett's Dannenbaum 8, Stratton Ridge, sd 3145 ft.

CALHOUN COUNTY — Baker & Thompson's Thomas 1, 9 mi w Pt. Lavaca, dr 2263 ft gbo.

CHAMBERS COUNTY — Pure Oil Co.'s Lost River 2, Lost Lake, td 3623 ft; Lost Lake 2, dr 1200 ft gbo. Mills Bennett's Kirby 2, Barbers Hill, dr 5020 ft sticky shale; Smith 2, Barbers Hill, ru. Gulf's Wilborn 1, Anahuac, dr 2063 ft water sand.

COLORADO COUNTY — Rich Oil Corp.'s Brun 1, 3 mi ne Columbus, sd 1215 ft.

FAYETTE COUNTY—Phalen et al's Cervanca 1, 6 mi s La Grange, dr 2730 ft shale. Moore et al's Kerr 1, Muldoon, sd 2078 ft.

FORT BEND COUNTY—Sun Oil Co.'s R. C. Farmer 4, Boling, dr 2365 ft gbo; Kasparek 4, Boling, dr 3660 ft gbo. Fort Bend Oil Co.'s Moore 1, Orchard, dr 3675 ft oil sand. Gulf's E. C. Farmer 2, Boling, dr 3850 ft salt. Boling Dome Oil Corp.'s Armstrong 1, Boling, td 2685 ft. Humble's Dew 1, Sugarland, dr 3548 ft sand; Sugarland Industries 4, Sugarland, set 6⅝-inch cas at 3465 ft; Deathridge 1, Sugarland, sd 3814 ft; Deathridge 2, ru; Nelson 1, Sugarland, r 3027 ft; Camp 2, Sugarland, lcn. J. H. Diehl's Armstrong 1, 2 mi e Boling, sd 500 ft. South Texas Exploration Co.'s Hartsfield 1, Needville, dr 4300 ft gbo.

GALVESTON COUNTY—Long et al's Irvin & Bishop 1, 2 mi s Dickinson, sd 4322 ft. Republic Prod. Co.'s Lobit 1, 1 mi nw Dickinson, dr 3500 ft sand.

GOLIAD COUNTY — J. E. Alexander's Campbell 1, 1 mi n Goliad, abn 1042 ft. Alexander et al's Bergman 1, Goliad, dr 500 ft shale. McCarson et al's Broyles 1, Goliad Townsite, abn at 1000 ft; Flake 1, Goliad, ru. Southern Crude's Patterson 1, 10 mi nw Goliad, dr 2730 ft shale.

HARDIN COUNTY—Chappel Hill Oil Co.'s Hale 1, 5 mi nw Sour Lake, sd 1810 ft. Guedry Drlg. Co.'s Guedry 1, 3 mi s Batson, dk.

HARRIS COUNTY—Torsen et al's Stewart 1, 4 mi sw Genoa, sd 691 ft. Hunt et al's Lobit 1, 4 mi n Goose Creek, sd 2145 ft. Humble's Warren 5, Hockley, dr 327 ft; Minnetex 1, Mykawa, r 4976 ft; Simms-Smith 74, Goose Creek, dr 6053 ft sand and shale. Paxton et al's Brubacker 1, 1 mi ne Clodine, dr 400 ft gbo. J. A. Shine et al's Kitzman 1, 2 mi n Cypress, dr 2910 ft gbo. Brains et al's Lentze 1, 4 mi s Tom Ball, sd 1120 ft.

JASPER COUNTY—Great Lakes Oil Co.'s Boykin 3, 3 mi ne Rockland, dk. Tar Well Oil Co.'s Mills 1, 3 mi ne Rockland, td 1763 ft. L. A. Painter's Boykin 1, 3 mi ne Rockland, td 1000 ft.

JACKSON COUNTY — The Texas Co.'s Moore 1, Edna, dr 2820 ft shale. Wright Bros.' Classen 2, Edna, dr 3218 ft sandy shale. Douglas & Lawrence's Lawrence 1, Edna, sd 3020 ft.

JEFFERSON COUNTY — Deep Test Oil Corp.'s McFaddin 1, 1 mi e Spindle Top, sd 2825 ft. Southern Spindle Top O. & Dev. Co.'s Young 1, 1 mi w Nederland, sd 3425 ft. Beaumont Oil Co.'s Tyrrell 1, 2 mi w Brooks, dk. Westbury Synd.'s West 1, 1 mi ne Westbury, dr 2220 ft gbo. Gulf's Burrell et al 2, Fannette, dr 5362 ft shale and lime. River Oil Co.'s Ship Channel Land Co. 1, 2 mi se Beaumont, td 632 ft. Bleakie Oil Co.'s Tollivar 1, 2 mi ne Westbury, ru. The Texas Co.'s Pipkin & Davis 1, Big Hill, dr 2495 ft.

LIBERTY COUNTY—Barlow et al's Hinchcliff 1, 2½ mi ne Cleveland, sd 2215 ft. Kouri et al's Campbell 1, 6 mi s Cleveland, sd 2000 ft. Big Dome Interests' Finley 2, 3 mi nw Hardin, dk. Finley 1, 3 mi nw Hardin, abn at 4335 ft. The Texas Co.'s Davis 1, Davis Hill, dr 4625 ft rock. Humble's Sterling 3, Moss Bluff, dr 2853 ft rock; Welder 9, S. Dayton, completed for 75 bbls at 3628 ft. Sun Oil Co.'s Koveleika 1, N. Dayton, dr 3202 ft gbo. Union Explo. Co.'s Esperson 1, 5 mi s Dayton, dr 4235 ft shale.

MATAGORDA COUNTY — Rycade Oil Corp.'s Hudson-Humble 4, Markham, ru. Crossland et al's Murphy 1, Shepherd's Mott, dr 1875 ft lime. Dr. P. S. Griffith's Culver 1, e Citrus Grove, sd 3215 ft; Baer 1, 1½ mi n Gulf Hill, sd 1900 ft.

ORANGE COUNTY — Veteran Oil Co.'s Reed 1, 2 mi se Orange field, td 2072 ft.

VICTORIA COUNTY—Houston Oil Co.'s Kyle 2, ½ mi e Nursery, tested water at 605 ft.

WASHINGTON COUNTY—Sun Oil Co.'s Marcus 1, Clay Creek dome, dr 2725 ft sandy shale; Einman 1, Clay Creek dome, set 6-inch cas at 1785 ft; Schirmer 2, Clay Creek dome, lcn; H. Witt 1, Clay Creek, ru; F. Grote 1, Clay Creek, plugging back to 1400 ft from 1474 ft; Mrs. J. Grote 1, Clay Creek, dr.

SOUTH LOUISIANA

ACADIA PARISH—E. F. Simms' Clement 1, Jennings, sd for orders at 3872 ft; Clement 2, Jennings, sd 3840 ft; Grace von Schueler 1, Jennings, coring sand at 4010 ft; Jennings Oil Co. 1, Jennings, sd 3545 ft; Cockrell 1, Jennings, sd 4330 ft.

ASCENSION PARISH — Gulf's United Lands Co. 11, Sorrento, dk; United Lands Co. 13, Sorrento, ru. Triumph Oil Corp.'s Lacey et al 2, 1½ mi se Sorrento, sd 1100 ft. Burnside Oil Co.'s Roberts 1, td 785 ft. Big Dome Drlg. & Dev. Co. & J. S. Kimbrough's Rearwood 1, dr 685 ft sand and gravel; Baton Rouge Pet. Co.'s Liotta 1, sd 1000 ft.

CALCASIEU PARISH — Union Sulphur Co.'s Fee 729, Sulphur dome, dk; Fee 731, Sulphur, completed for 1680 bbls thru ¾-inch choke at 4850 ft; Fee 733, Sulphur, dr 5350 ft sticky shale; Fee 735, Sulphur, prep to deepen from 4275 ft; Fee 736, Sulphur, ru; Fee 737, Sulphur, sdtr at 2840 ft gbo; Fee 738, sd; Fee 739, ru; Fee 740, dr 1715 ft rock. J. W. Watson et al's La. Land Co. 1, Sulphur, dr 4850 ft hard sand.

CAMERON PARISH — Pure Oil Co.'s Yount-Lee 7, Sweet Lake, dr 3350 ft rock; Yount-Lee 8, Sweet Lake, dr 1350 ft gbo. Calcasieu Oil Co.'s Broaux 1, Kelso Bayou, dr 4205 ft sand showing oil; Valery 5, Kelso Bayou, dr 3635 ft sandy shale; Watkins 12, Kelso Bayou, prep to set cas at 3960 ft. Rycade Oil Corp.'s Yount-Lee 1, Hackberry, dr 3252 ft rock. Yount-Lee Oil Co.'s School Land 8, Hackberry, dr 3840 ft. Shell Pet. Corp.'s Watkins 5, Black Bayou dome, dr 1255 ft. Watkins 6, Black Bayou dome, dr 1000 ft gbo. Cameron Oil Co.'s Benson Vincent 1, Hackberry, ru.

IBERIA PARISH—La. Land & Exploration Co.'s Vermilion Bay A-3, Cypremont Point,

ABBREVIATIONS

NOTE—The following is the explanation of abreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn—abandoned; bbls—barrels; b.s.—basic sediment; cas casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

Standard Oil Group Dividends Largest On Record

New York, N. Y.—A total of $221,567,410 will be distributed in cash dividends by the Standard Oil Group during 1928, according to figures compiled by Carl H. Pforzheimer and Company, specilaists in Standard Oil Securities. Compared with last year's disbursements, which aggregated $213,617,940, this year's dividend record will establish a new high record, being the largest amount disbursed in any one year since the dissolution of the old Standard Oil Company in 1911.

Dividend payments in the fourth quarter of 1928 totaled $64,877,432, an increase of $14,000,000 over the previous quarter and $9,000,000 over the same quarter of last year. All regular declarations have been made with the exception of Prairie Pipe Line Company and this company's disbursement is estimated at the regular quarterly rate of $3.50 a share. Estimates of current quarterly disbursements are the largest ever recorded in any single quarter since dissolution. Several of the companies increased their cash disbursements substantially during 1928 but such increased payments were offset by the omission or lowering of dividends by other companies. Standard Oil Company of California paid $37,782,294 during the current year, against $33,059,507 in 1927, while Vacuum Oil Company paid $18,912,415 against $12,494,160 in 1927. Standard Oil Company of New Jersey distributed $36,475,832 in 1928 against $38,423,860 in 1927, the latter amount including a payment of approximately $3,500,000 on the preferred stock issue which was retired in March, 1927.

The record of quarterly cash disbursements during the past few years follows:

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Full Year
1928	$48,927,670	$57,694,206	$50,068,102	$64,877,432	$221,567,410
1927	55,873,413	54,291,615	47,728,440	55,724,472	213,617,940
1926	40,580,317	50,618,451	46,427,278	62,685,548	200,327,594
1925	34,355,618	41,905,728	35,140,584	42,104,169	153,506,099

dr 2750 ft gbo. La. Oil & Gas Co.'s Bernard 1, New Iberia dome, td 2590 ft. Gulf's State Z-8, Loreauville, ru; Kling 3, Loreauville, set cas at 1050 ft.

IBERVILLE PARISH—Shell Pet. Corp.'s Wilbert 3, White Castle, ru. Standard of La.'s Wilbert 2, Bayou Blue dome, lcn; Schwing 1, Bayou Blue dome, ru. Union Sulphur Co.'s Schwing 3, Bayou des Glaise, dr 2830 ft rock.

LA FOURCHE PARISH—Gulf's Stark et al 8, Thibodaux, dr 1185 ft.

ST. MARTIN PARISH—Rycade Oil Corp.'s 5, td 3755 ft, cavity; Bayou Bouillon 6, ru; State 3, Bayou Bouillon, lcn; Bayou Bouillon Atchafalaya Fee 3, Bayou Bouillon, cor 4075 ft; Atchafalaya Fee 4, Bayou Bouillon, td 3960 ft. Atchafalaya Fee 5, Bayou Bouillon, dk. Ohio Oil Co.'s Martin et al 3, Hager dome, dr 4025 ft gbo. Yount-Lee Oil Co.'s La. Pet. Co. 3, Anse La Butte, dr 3900 ft gbo.

ST. MARY PARISH—J. Dannenbanm's Le Blue 1, Charenton, sd 3015 ft.

ST. TAMMANY PARISH—Pearl Oil Corp.'s Fritsche 1, Slidell, prep to set 6-inch cas at 2020 ft.

TANGIPAHOA PARISH—Tanli Oil Co.'s Weinberger 2, dr 3925 ft gbo.

TERREBONNE PARISH — Southern Gas Co.'s Peoples Sugar Co. 1, Houma, dr 2287 ft.

WEST FELICIANA PARISH—Robinson & Long's Racourci 1, dr 2450 ft sandy shale.

SOUTHWEST TEXAS

Completions

Company, Well and Location	Initial Production Bbls.	Depth
BASTROP COUNTY—		
Atlantic Yost 1, Cedar Creek	300	1360
Amerada Pet. Corp., Yost 1, Cedar Creek	*	1767

BASTROP COUNTY—Cranfill & Reynolds' Yost 3, Cedar Creek, showing oil at 1355 ft. Amerada Pet. Corp.'s Yost 1, Cedar Creek, abn at 1767 ft td. The Texas Co.'s Yost 1, Cedar Creek, dr 442 ft shale. Atlantic Oil Producing Co.'s Yost 1, Cedar Creek, completed for 300 bbls at 1360 ft.

DUVAL COUNTY—Sun Oil Co.'s Norton 1, prep. to dr deeper from 2347 ft; Norton 2, ru; Davis 1, lcn. R. Driscoll's Fee 13, dr 2120 ft. O. Henry Oil Co.'s Henry 1, dr 400 ft shale.

HIDALGO COUNTY—Queen City O. & G. Co.'s American Land & Irrigation Co. 2, 3 mi n Mercedes, sd 700 ft.

JIM HOGG COUNTY—T. J. Conway's Palacios 1, r 2010 ft.

JIM WELLS COUNTY—Cushing Oil Co.'s Perez 2, 3 mi n Alice, sd 2700 ft.

KINNEY COUNTY—Stephens et al's Clamp 1, sd 1800 ft.

MAVERICK COUNTY—Rycade's Sullivan 3, dr 4695 ft; Chittam 2, cleaning out, td 7635 ft; Chittam 3, ru. Ryan Consolidated Pet. Co.'s Indio 2, td 1175 ft.

NUECES COUNTY — Maddox-Horn-Davis' Ragland 1, Aqua Dulce, sd 400 ft. Sigmond et al's Allen 1, td 2850 ft. Rosenblum & Grimm's Alban 1, Aqua Dulce, sd 2830 ft.

SAN PATRICIO COUNTY — LaPrelle et al's White Point 1, td 3130 ft. Pickett et al's Whitworth 1, White Point, sd 3250 ft. Leach et al's Collins 1, Mathis, dr 2425 ft. sendez 1, dr 2850 ft.

WEST TEXAS

Completion

CROCKETT COUNTY—		
V. T. Bolin & Co., Coates 1	*	3050

ANDREWS COUNTY—Deep Rock Oil Co.'s Hostetter 1, dr 1355 ft. Mid-Continent Pet. Corp.'s Fisher 1, lcn.

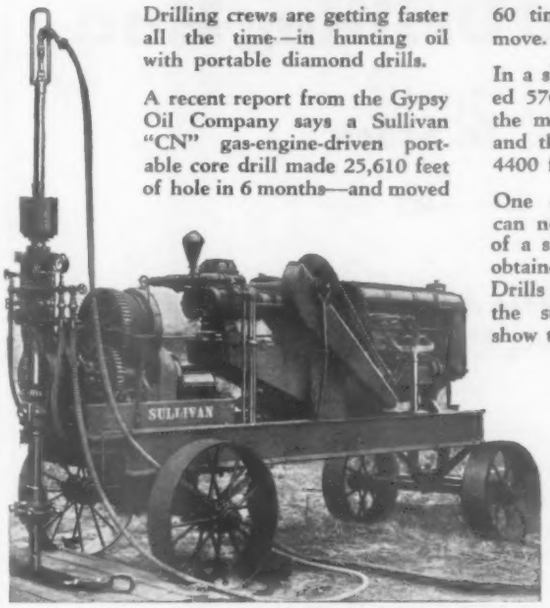
BORDEN COUNTY — Condor Pet. Co.'s Hall 1, elev 2601 ft, top salt 1235 ft, top lime 2969 ft, sd hfw 3525 ft. E. L. Dcheny et al's Koonsman 1, elev 2427 ft, top salt 900 ft, top lime 2430 ft, sd 3791 ft. Greene O. & R. Co.'s Slaughter 1, dk.

BREWSTER COUNTY—Ed. W. Bateman & Co.'s Neville 1, elev 3950 ft, dr 1000 ft. Brewster Oil Co.'s Fee 1, machine. C. Williams et al's Poncey 1, sd 500 ft.

COKE COUNTY—Cates & Dennis' Mims 1, sd 1465 ft. Lipau Oil Co.'s Rawlings 1, sd 2840 ft. Louisiana O. R. Coru.'s Powers 1, elev 2040 ft, dr 3385 ft. Mid-Kansas O. & G. Co.'s Lackey 1, dr 2650 ft.

CONCHO COUNTY—Lloyd Jones et al's

Diamond Drill Bores 25,610 Feet, Moves 60 Times in 6 Months



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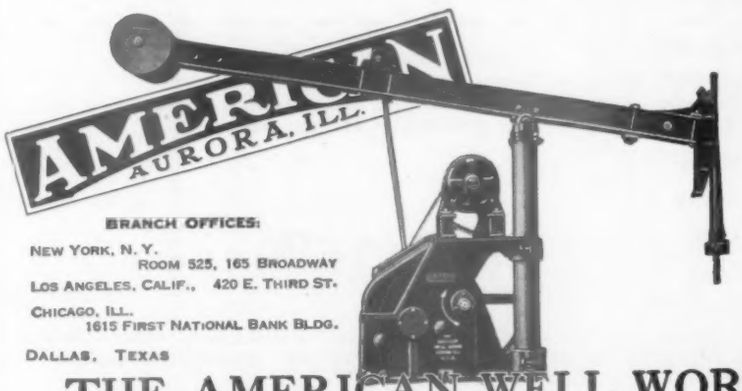

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Jones 1, set cas 660 ft. Exploration Co.'s Hartgrove 2, machine.

CRANE COUNTY — C. C. Duffey et al's Cowden 4, dk. Gulf's Waddell 6, rig.

CROCKETT COUNTY—Barbara Oil Co.'s Cox 1, elev 2051 ft, top lime 1082 ft, sd hfw 1290 ft. W. W. Donnelly et al's Shannon 1, (Sec. 9), elev 2486 ft, sd 1719 ft. Donnelly-W. A. Moncrief et al's Todd 1, (Sec. 35), spudded and sd. J. D. Wheeler et al's State Fee 1, dr 330 ft. F. P. Zoch-W. A. Moncrief et al's Tippett 1, dr 350 ft.

CULBERSON COUNTY — Deep Rock Oil Co.'s Seay 2, dr 995 ft. J. H. Hickey et al's Finley 1, sd 1660 ft. Scott & Dittman's Miller 1, sd 1765 ft. West Texas Oil & Exploration Co.'s McGregor 1, sd 385 ft.

JEFF DAVIS COUNTY—Sam F. Means et al's J. Z. Means 1, dr 3300 ft.

DAWSON COUNTY—Magnolia Pet. Co.'s Jeter 1, elev 2889 ft, top solt 1640 ft, top lime 3460 ft, dr 3600 ft.

EDWARDS COUNTY—Gale Oil Co.'s Jernigan 1, sd hfw 4010 ft. McMan O. & G. Co.'s Schreiner 1, fsh cas 3995 ft.

EL PASO COUNTY—C. E. Sillix et al's Malone 1, sd 1010 ft.

FISHER COUNTY—Bickerstaff et al's McWhirter 1, sd 1875 ft. Cranfill-Reynolds & Sun Oil Co.'s Brown 1, rig; Sharp 1, elev 1809 ft, flowed oil and water 3140-41 ft. J. B. Dunigan et al's Henry 1, dr 1260 ft. Hucony Gas Co.'s Marberry 1, elev 1876 ft, sd 2840 ft. Rainey et al's Marberry 2, sd 3507 ft. Thompson et al's Newman 1, dr 865 ft.

GAINES COUNTY — Pure Oil Co.'s Williamson 1, dr 1830 ft.

GARZA COUNTY—Emerald Oil Co.'s Boren 3, sd 4801 ft.

GLASSCOCK COUNTY—Chas. Daniels et al's J. W. Meek 1, dk. Gibson-Johnson et al's B. C. Mann 1, dr 185 ft. Merriwether Oil Co.'s McDowell 2, dr 1265 ft. Bob Penn et al's Hughes et al 1, spudding. White Eagle O. & R. Co.'s Dunbar 1, spudding. World Oil Co.'s McDowell 1-C, elev 2530 ft, rig.

HOWARD COUNTY—Andrews et al's Neal 1, elev 2731 ft, top salt 2015 ft, top lime 3150 ft, sd 3278 ft. Greene O. & R. Co.'s Furrh 1, elev 2277 ft, top salt 1255 ft, top lime 2097 ft, dr 2870 ft. Group One Oil Corp. (Texon's) Quinn 1, elev 2499 ft, top salt 1070 ft, top lime 3103 ft, sulphur water 3250 ft, crooked hole 3465 ft. L. C. Harrison et al's Dodge 1, elev 2321 ft, top lime 1830 ft, sd 3257 ft. Phillips Pet. Co.'s Thomas 1, elev 2591 ft, top salt 1170 ft, dr 3120 ft.

HUDSPETH COUNTY — The California Co.'s University 1, elev 5833 ft, bad hole 248 ft. Western States Oil Co.'s Gardner-Mosely 1, sd 3125 ft; S. W. Moore 1, sd 2750 ft.

IRION COUNTY — Furhman Pet. Corp.'s Sugg 1, 2 and 3, lcns. Kimbrough et al's Nutt 1, sd 1420 ft. Kimbrough & Flinchbaugh's Tankersley 1, spudded and sd. Kingwood Oil Co.'s J. D. Sugg 1, elev 2334 ft, cased off oil pay, sd 3675 ft. Mertzon Oil Co.'s Roach 1, sd 2202 ft. Signal Oil Co.'s Sugg 1, elev 2415 ft, top salt 705 ft, sd hfw 3585 ft. Webb et al's Nutt 1, dr 2510 ft.

JONES COUNTY—Atkinson & Sandefer's Hudspeth 1, top lime 2563 ft, swab 50 bbls oil and 75 bbls water 11 hours 2578-85 ft. E. P. Campbell et al's Herndon 2, rig. McNeeley et al's Bland 1, spudded and sd. Mid-Sun Oil Corp.'s Hoehn 1, sd 1100 ft. Milt Richardson et al's Martin 1, sd 900 ft. Roeser-Pendleton et al's Castle 1, rig. Sedwick O. & G. Co.'s Routh 1, rig. Tomberlin et al's Horn 1, rig. Woods & Williams' Parr 1, ur cas 2260 ft.

LOVING COUNTY—Lockhart & Co.'s H. L. Lepp 1, lcn.

LYNN COUNTY—Geo. B. McCamey et al's C. O. Edwards 1, dr 145 ft. H. F. Miller et al's W. H. May 1, spudded and sd.

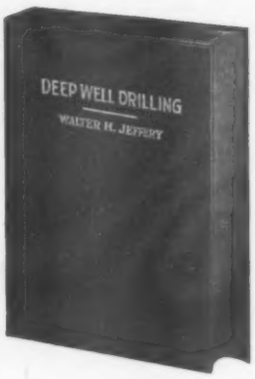
MIDLAND COUNTY—O. H. Shoup et al's Parks 1, elev 2871 ft, top salt 1740 ft, dr 4905 ft.

MITCHELL COUNTY—E. P. Campbell et al's Pond 1, dr 1440 ft. Hucony Gas Co.'s Weichsel 1, elev 2139 ft, top salt 550 ft, top lime 1342 ft, dr 3605 ft. Simms Oil Co.'s Ellwood 1, lcn. Teas & Wheeler's Radford 1, elev 2223 ft, top lime 1365 ft, dr 3005 ft.

NOLAN COUNTY—T. G. Bradstreet et al's Kuteman 1, rig. Herbert Oil Co.'s Pepper 1, elev 2242 ft, dr 3530 ft. C. M. Root Drilling

Second Revised Edition . . . .

Deep Well Drilling



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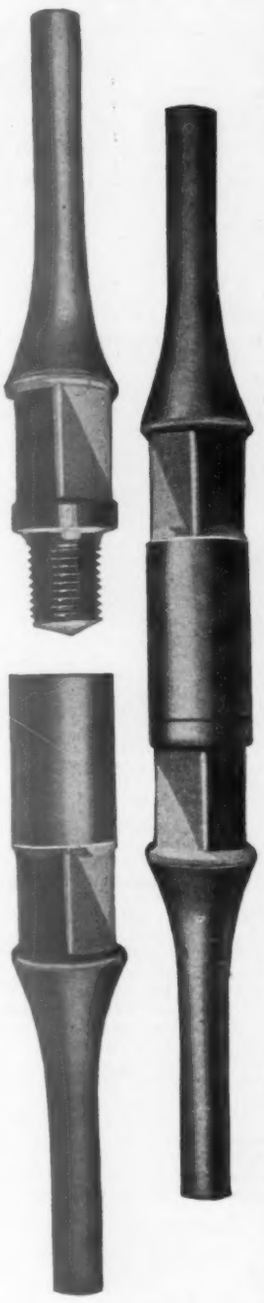

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SALES OFFICES
Monadnock Bldg., Chicago, Ill. General Motors Bldg. Detroit, Michigan Pioneer Trust Bldg. Kansas City, Mo.

Co.'s Simpson 1, dr 550 ft. White Eagle O. & R. Co.'s Allyn 1, dr 1250 ft.

PECOS COUNTY—Alexander-Lyles et al's Sellman 1, elev 2672 ft, top salt 814 ft, top lime 1602 ft, sd hfw show gas and oil, td 1655 ft. Geo. H. Anderson et al's University 1, Sec. 11, Blk. 17, elev 2801 ft, top salt 1030 ft, top lime 1715 or 1760 ft, running 5-inch cas to test gas with spray oil and water, td 1961 ft. Atlantic Oil Prod. Co.'s Sellman 1, sr 800 ft. Benedum-Trees et al's Corder 1-A, top salt 1840 ft, sd 2518 ft. M. Z. Dibble et al's Bonebrake 1, elev 2555 ft, top salt 1874 ft, sd 2004 ft. Ditto Interests' Montgomery 1, sd 660 ft. McCarty Oil Co.'s Bennett 1, dr 1325 ft. Mauch & Krogen's Holmes 1, elev 2352 ft, top salt 535 ft, sd 1010 ft. Pecos Valley Oil Co.'s Fee 2, lcn. Phillips Pet. Co.'s J. L. Nutt 2, rig. Schumaker et al's Williams 1, bad hole 330 ft. Southern Crude Oil Pur. Co.'s Scharbauer 1, elev 2680 ft, fsh 3380 ft. Talbot & Dittman's Unsicker 1, dr 565 ft. Transcontinental's University 1, elev 2552 ft, top lime 1035 ft, fsh 4128 ft. Trees Oil Co.'s J. C. Trees 1, lcn. World Oil Co.'s Kloh 1, elev 2810 ft, sd 3105 ft. Yates Ranch Oil Co.'s Yates 1, dr anhydrite 1140 ft.

PRESIDIO COUNTY—L. C. Brite et al's Brite 1, sd 4152 ft. Eastland Oil Co. et al's Tootle 1, spudded and sd. Delmar-Empire-Phillips Pet. Co.'s Tootle 1, co 950 ft.

REAGAN COUNTY—The California Co.'s University 5, dk. Big Lake Oil Co.'s University 151, (deep test), sd 2605 ft.

REEVES COUNTY—E. W. Brooks et al's Eddins 1, elev 2719 ft, top salt 1622 ft, top gray lime 3216 ft, sd 5658 ft. D. P. Davis et al's Kinney 1, spudded and sd. Exploration Co.'s Kinney 1, elev 2847 ft, sd 2900 ft. Dr. Kitsos et al's Kloh 1, elev 2786 ft, dr 885 ft. Bob Penn et al's Bowles 1, rig. Lee O. White et al's Kloh 1, dk.

RUNNELS COUNTY—G. W. Boyce et al's Lange 1, dr 160 ft. Foster et al's Currie 1, lcn. Ira Nourse & Tilton et al's Cramer 1, dr 1520 ft. Union Oil Co.'s Allen 1, dr 1670 ft. Vacuum Oil Co. et al's Brevard 1, dr 1650 ft.

SCHLEICHER COUNTY — Ft. McKavitt Oil Co.'s Tisdale 1, set cas 230 ft.

SCURRY COUNTY—Landreth Prod. Corp.'s Hillmer 1, elev 2314 ft, top salt 870 ft, sd 4290 ft. J. B. Mims et al's Koonsman 1, spudded and sd. R. B. Pender O. & G. Co.'s Davis 1, elev 2208 ft, top salt 445 ft, sd 1040 ft.

STERLING COUNTY — Foster & Gracey Oil Co.'s Foster 1, elev 2260 ft, sd hfw 1658 ft.

STONEWALL COUNTY—Sun Oil Co. et al's Rayner 1, elev 1818 ft, top lime 1500 ft, dr 3415 ft.

SUTTON COUNTY — Phillips Pet. Co.'s Cawthorn 1, rig; Holman 1, fsh 5775 ft. Sou. Crude Oil Pur. Co.'s Allison 1, dk.

TAYLOR COUNTY—Burnham et al's Amyx 1, sd 1640 ft. Grisham-Hunter Corp.'s H. E. Campbell 1, dk. Hurley Oil Co.'s Payne 1, top lime 2473 ft, dr 2760 ft. Mid-Kansas O. & G. Co.'s Parramore 1, ur cas 2055 ft. Mid-Continent Pet. Corp.'s J. H. Taylor 1, dr 720 ft.

TERRELL COUNTY—Big Bend Oil Co.'s Bassett 1, spudded and sd. Mrs. J. B. McPhee et al's Belt 1, spudded and sd. Milham Corp.'s Bassett 1, elev 2270 ft, cem. cavey hole 4430 ft. Keck-Pecos Oil Trust's Hamilton 1, sd 1749 ft.

TERRY COUNTY—Superior Oil Producing Co.'s Brownfield 1, elev 3205 ft, top lime 4565 ft, dr 4715 ft.

VAL VERDE COUNTY—Dyer Bros. et al's W. E. Wilson 1, set cas 2160 ft. Producers Oil Co. et al's Everett 1, dr 1565 ft. Val Vert Oil Corp.'s Bassett 1-A, set cas 1510 ft. Independent Operators' Whitehead Bros. 1, dr 4605 ft.

WARD COUNTY—E. B. Lovelace et al's Redman 1, spudded and sd. Prairie O. & G. Co.'s Sealy 1, elev 2666 ft, top salt 1073 ft, top lime 3110 ft, show oil 3295-3300 ft, dr 3360 ft. Rector Oil Co.'s Johnson 1, elev 2438 ft, top salt 745 ft, top lime 2010 ft, fsh 2501 ft. J. F. Shipley et al's Hayzlett 1, elev 2503 ft, top salt 727 ft, flowing 120 bbls oil daily 2480-81 ft. Talbot & Dittman's C. C. Dorr 1, elev 2430 ft, top salt 745 ft, dr 1750 ft.

WINKLER COUNTY — Amerada Pet. Corp.'s Daugherty 2, elev 2891 ft, top lime 2654 ft, dr 2925 ft; Daugherty 3, dr 2535 ft. Atlantic-Kessler-Logan's Daugherty 2, elev 2894 ft, top lime 2622 ft, sd tested 600 bbls daily 10 per cent water at 3143-62 ft. Barnsdall Oil Co.'s Morton 1, elev 2730 ft, top lime 2870 ft, dr dry lime 3060 ft; Morton 2, sd 1095 ft; Morton 3, rig. Empire G. & F. Co.'s Daugherty 2, elev 2889 ft, top lime 2690 ft, dr 2855 ft; Daugherty 3, elev 2885 ft, top lime 2774 ft, cem cas 2781 ft; Daugherty 1-B, elev 2909 ft, top lime 2821 ft, cem cas 2830 ft. Gulf Prod. Co.'s O'Brien 2, top salt 2077 ft, dr 2400 ft; O'Brien 3, top salt 2420 ft, co 2430 ft. Magnolia Pet. Co.'s Scarborough 1, elev 2953 ft, top salt 1122 ft, top lime 2770 ft, dr cement plug 2862 ft. Marland Prod. Co.'s Morton 1, stdz 2657 ft, dr 2690 ft; Morton 2, dk. Prairie O. & G. Co.'s Daugherty 1, top lime 2685 ft, stdz 2748 ft; Daugherty 2, dr 1080 ft; Morton 1, top salt 1540 ft, dr anhydrite 2745 ft. Shell Pet. Corp. & Danciger O. & R. Co.'s Daugherty 1, dr 2520 ft; Daugherty 2, top lime 2742 ft, cem cas 2747 ft. Simms Oil Co. & Southwest Oil Prod. Co.'s Sealy 1, dr 1750 ft. Texas-Canadian Oil Co.'s Klch 1, lcn. Warner-Quinlan Co.'s Daugherty et al 1, dr 1820 ft. Wentz Oil Corp.'s Morton 1, elev 2729 ft, top salt 1706 ft, top lime 2672 ft, oil pay 2745-60 and 2842-43 ft, dr 1900 ft, oih at 2883 ft.

YOAKUM COUNTY — Bert Weekly Oil Corp.'s R. L. Knight 1, dk.

MOUNTAIN STATES

WYOMING

ALBANY—Union of California 1, 1-16-76, dr 2066 ft.

BIG HORN—Utah Southern Oil Co., 3, 26-56n-97w, prep to test at 7365 ft. Producers & Refiners 3, 24-56-98, rigged rotary, td 2708 ft. Prairie O. & G. Chilcote 1, 35-56n-95w, straightening hole 1475 ft. P. & R. South Frannie 1, 7-57-97, dr 1315 ft.

CARBON—P. & R. No. 3, 2-19-88, dr on iron 3909 ft. P. & R. O'Brien Springs 5, 12-24-88, rigging. Graybeal Synd., 16-28-81, temp susp. 5184 ft. Producers Oil Corp., se 35-12-92w, ready to resume, td 1005 ft. W. J. Davis, 6-16-92, lcn.

CROOK—Geo. W. Douglas, 34-52-67, lcn.

FREMONT—P. & R. Muskrat 2, nw 1-33n-92w, lcn. Gates & Holman, 6-33-94; material on location. Kinney-Coastal 1, 22-3n-1w, rig up.

HOT SPRINGS—Texas Prod. Co., sw 23-45n-100w, prep to set and cem 20-inch at 525 ft. Westland Oils, Inc., 23-44n-95, rig. MacPherson Oil Co., 2-44n-96w, dr 3200 ft, show at 3105 ft.

LINCOLN — Midwest Refining Co., Waterfall 1, 35-22-115, straightening 10-inch hole to 12-inch, td 1765 ft. Midwest Refining Co., Little Grey's River 1, 25-37-113, run 12½-inch at 744 ft, boiler trouble. Quad States, se 11-19-16, dr 2500 ft. Reeves Aylemore, 7-21-119, changing to rotary.

PARK—Grebo Royalty, Inc., 1, 2-47-100, dr 1600 ft. California Exploration Co. and P. & R., Pitchfork 1, 14-48n-102w, cemented 20-inch at 225 ft. Resolute Oil Co., nw 17-57-101, dr 1900 ft. Cody Pete, Nelson 1, 4-51-102, dr 1900 ft. Oregon-Wyoming Oil Co., 1, sw 30-52-101, td 1100 ft. Ohio Oil Co., Pulley 1, 27-53-101, plug back to Embar to so water. Lenco Oil Co., Pulley 1, 25-53-101, dr 725 ft. California Exploration Co., 1, 29-48-103, sd 200 ft. Midwest Refining Co., 36-25-98, lcn. Midwest Refining Co., 36-25-58-98, lcn. Midwest Refining Co., se 23-58-98w, rigging.

SWEETWATER — Prairie O. & G. Co., Tucker 1, 18-13-99, prep to undrr at 2530 ft. Ohio Oil Co., Humphreys 1, 2-12-101, dr 1500 ft. Sormir Pete Co., 13-21-100, stand 1335 ft.

SUBLETTE—California Co., Wyss 1, 12-32n-115w, sdtr bit, 1010 ft. Calif. Co., Buchell 1, 11-29-115, dr 2386 ft.

UINTA—California Co., U. P. 1, 7-17-116w, undrr 2144 ft. E. L. Doheny, 6-14-118, dr 2300 ft.

WESTON—Wyo. Drlg. Synd., ne 15-44n-64w, sd for winter 4350 ft. Teton Pete, 30-46-64, spudded in and dr.

MONTANA

BIG HORN—Texas-Montana Production Co., 2, 21-6s-35e, cem 188 ft.

BROADWATER—New Day Oil Co., 1, ne 29-5n-1e, dr in hole full of water.

BLAINE—Ohio Oil Co., Winngert 1, 3-34n-32e, dr 2210 ft.

CASCADE—Eden O. & G. Co., 27-18-4e, td 670 ft. U. S. Pete Co., Miller 1, 8-21-4e, reaming 935 ft. John E. Winther et al., Power 1, 11-22-1e, td 1850 ft.

CARBON—Ohio Oil Co., Northern Pacific 1, 11-7s-21e, fsh 4458 ft. Local Oil Co., 1, 25-9s-25e, no report.

CHOTEAU—Geraldine O. & G. Co., ne 1-21-11e, dr 1300 ft, oil showing. Williston-Shelby O. & G. Co., 1, 12-28-11e, sd 2675 ft, will resume.

CUSTER—Montana Belle, ne 28-8n-45e, dr 1400 ft.

FERGUS—Melton Corp., 1, se 24-21n-17e, td 2665 ft. Judith Basin Oil Co., 1, 33-19n-12e, sd 1925 ft, wait casing.

GALLATIN—California Co., Ringling 1, 35-5n-7e, undrr td 600 ft.

JUDITH BASIN—Gem Oil Co., 15-16-10e, rig up.

LIBERTY—Sunburst O. & R. Co., Bear's Den 1, 17-36-6e, fsh 1250 ft. Square Deal Pete, Johnson 1, se 1-32-7e, dr 3200 ft. Mid-Rocky Dev. Co., Federal Lands 1, 7-33-73, sd 1500 ft. Western Natural Gas Co., 22-37-4e, sd 2000 ft, ready to drill in. Cypress Oil Co., State 1, sw 36-28-6e, dr 1000 ft.

MUSSELSHELL—Laffea Oil Co., 1, 6-10n-25e, lcn.

PONDERA—Trapp Synd., Hover 1, 35-28-22e, td 1850 ft, to resume.

STILLWATER—J. S. Stewart, 5-2n-22e, set casing at 2130 ft.

SWEETGRASS — Shoshone Consolidated 1, 23-2n-15e, dr 4020 ft.

TETON—Texas Pacific, 12-22-1w, moving in. Mitchener et al, Mattoon 1, sw 3-23-1w, td 1375 ft.

TOOLE—Monalta Oil Co., 1, 1-37-4w, spudding. Wm. J. Maham 1, 10-31-1w, sd indefinitely 1900 ft.

UTAH

GRAND—Utah-Southern, Salt Valley 1, 13-23-21, contr. completed to 3000 ft. Utah Southern Shafer LA, 36-26-20, dr 2500 ft. Navajo Pete Co. 2, -29-21, dr in, 8¼-inch set at 2830 ft. Intermountain Venture Co., 1, sw 27-21s-19, sd 1602 ft. Big Six Oil Co. and Utah Oil Refining Co., Randall 1, 10-22-19, fsh 1710 ft. Brendell Sons, Crescent Eagle 2, 9-22-19, resuming at 100 ft. Cisco Union O. & G. Co., 20-21-22, spudded.

DUCHESNE—Utah Southern Oil Co., Pleasant Valley 1, 29-4-1, run 10-inch at 1804 ft.

SAN JUAN—Boulder Noll O. & G. Co., 17-34-25, prep, to resume at 2640 ft. Navajo Pete Co. of California 1, 12-35-24, lcn.

UTAH—Diamond Oil Co., 3, ne 29-8s-5e, dr 1700 ft.

WAYNE—Phillips Pete Corp., 1, 16-27-16, sd wait repairs 4275 ft.

NORTHERN CALIFORNIA

KERN COUNTY

BUTTONWILLOW — Milham Exploration Co.'s Wisnom 1, 16-28-23, sd 4500 ft. Doheny-Stone Drilling Co.'s Salisbury 1, 7-29-24, cmt 8¼-in cas 3660 ft, td 4630 ft. Lincoln Drilling Co.'s 1, 6-28-23, sp. Southern California Gas Co.'s 1, 10-28-23, lcn; Wisnom 1, 27-28-23, lcn.

COMANCHE POINT—W. W. Stabler's 1, 23-32-29, fsh for dr pipe 2890 ft.

DELANO—S. A. Delzel's Vedder 1, 4-26-29, deepening from 3100 ft.

EDISON—General Pet. Corp.'s Seale 10, 5-30-29, dr hard sand 3200 ft. Midway-Northern Oil Co.'s Brown 1, will deepen from 3750 ft.

GOULD HILLS—Elmer Oil Co.'s 1, 2-29-20, dr 1100 ft. Exeter Oil Co.'s Pray 2, 1-29-20, will test at 875 ft.

SHALE HILLS—Oildale Oil Co.'s 1, 13-27-18, dr shale 635 ft. M. M. Young's 1, 6-27-19, new lcn.

RIO BRAVO—Pacific Coast Oil Co.'s 1, 15-19-25, rigging up. Elmer Oil Co.'s 1, 8-28-25, dr gray sand 4855 ft.

SAN EMIDIO—Standard's K-C-L 1, 35-11-22, dr hard sand 3765 ft.

SEMITROPIC—Richfield's Kerwin 1, 21-26-22, co 4760 ft.

SANTA BARBARA COUNTY

CARPENTERIA—Continental's Franklin 1, dr shale and rock 2435 ft.

SANTA BARBARA — Gillam and Clarke's Southwest-Producing 1, 2-4-28, sd 1850 ft.

REFUGIO CANYON—Shell's Rutherford 1, rigging up.

VENTURA COUNTY

CAMARILLO—American Oil Co.'s 1, 33-2-20, dr 650 ft.

OJAI—Continental's Thompsson 1, 21-4-22, installing rotary, td 2650 ft; G. B. 2, 21-4-22, sd 2735 ft. E. J. Miley's Casitas 2-A, co 775 ft. Rancho Riva Oil Co.'s 1, 28-4-23, fsh 275 ft.

PIRU—Bolas Chica Oil Corp.'s Hidden 1, 5-4-18, bldg rig. Petroleum Securities Co.'s Diablo

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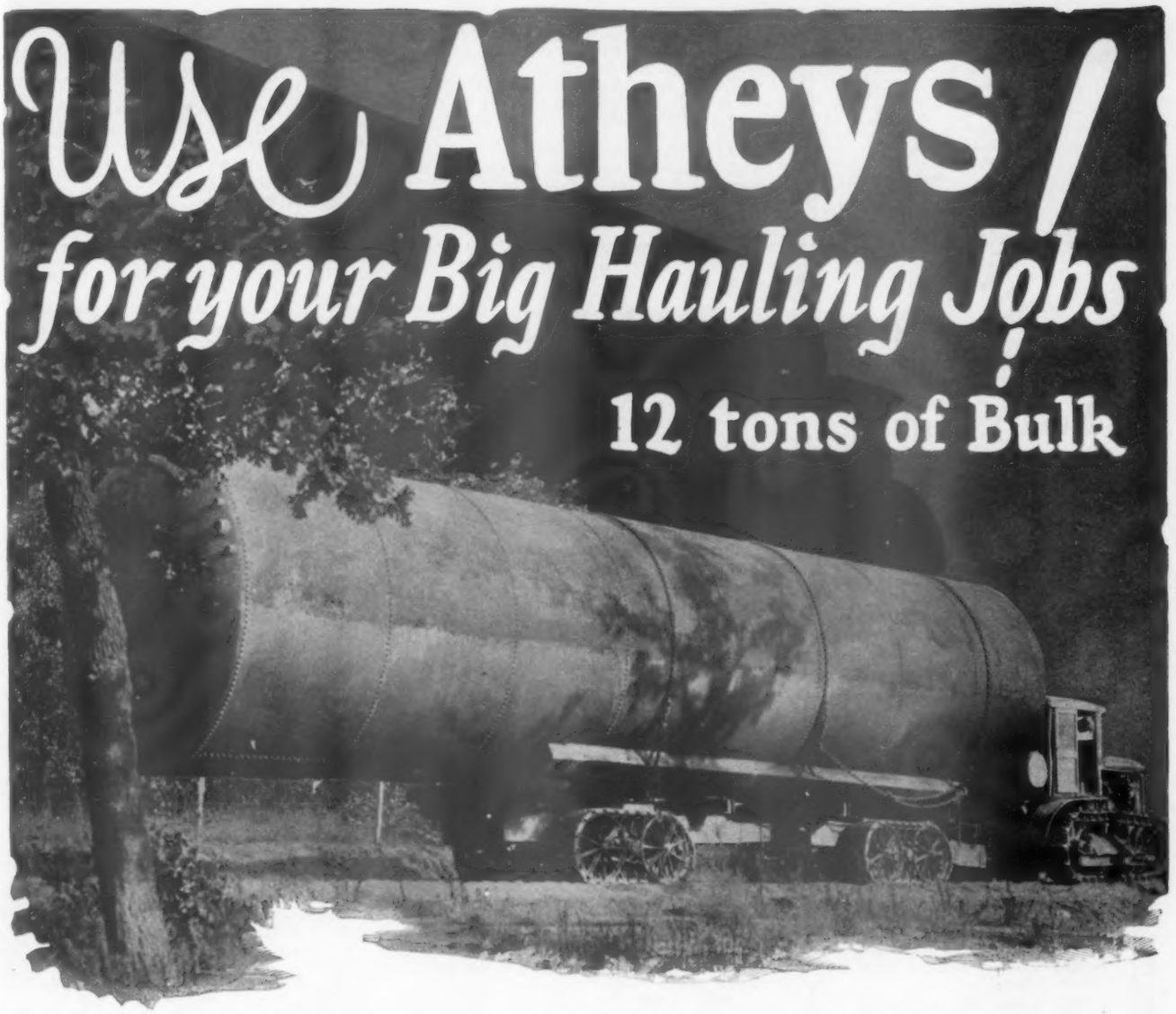

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BEAUMONT, TEXAS

1, 26-5-10, dr gray sand 6520 ft. Rio Grande Oil Co.'s B. B. N. 1, 13-4-9, co 2100 ft, td 2150 ft. Wasibi Oil Co.'s Bishop 2, 34-3-19, dr hard sand 2810 ft.

SANTA PAULA—W. W. Bryant's 3, 21-4-21, dr shale and sand 675 ft. San Pedro- Pt. Fermin Syn.'s Kellerman 1, 13-4-21, dr sand 700 ft.

SATICOY—Standard's Citrus 5, 10-2-22, dr sand and streaks shale 3900 ft. Ohio Oil Co.'s Alexander 1, dr sandy shale 4176 ft.

SIMI—Emma F. Exline's Seaton 1, 32-5-21, fsh for dr pipe 2400 ft. Shell's Marr 1, 31-3-17, rigging up.

SOUTH MOUNTAIN — Ring Pet. Corp.'s Converse 1, 3-3-21, trying to release 4¼-in cas, td 4840 ft.

MISCELLANEOUS

FRESNO COUNTY—Currency Pet. Co.'s 1, 28-21-14, dr shale 635 ft. Fresno-Madera Syn.'s 1, 18-21-21, dr hard sand 4163 ft.

SAN LUIS OBISPO COUNTY — Holland and Kennebrew's Vishnu 1, 22-32-22, re-dr 1700 ft. North State Oil Co.'s 1, 11-22-28, dr brown shale 1505 ft. Panorama Oil Co.'s 1, 7-31-21, dr shale 3217 ft. Paso Robles Oil Co.'s 1, 34-27-13, co 1825 ft. Union's Russ 1, 34-32-15, dr shale 3200 ft; Chandled 1, 12-32-15, dr shale and sand 2720 ft.

SONOMA COUNTY—Shell's 1, 29-5-6, dr sand 2066 ft.

TULARE COUNTY—Angicla Oil Co.'s 1, 27-22-23, rigging up. Kings-Tulare Syn.'s Palmer 1, 19-21-23, swabbed water on test, td 5657 ft.

SOUTHERN CALIFORNIA

Completions

Company, Well and Location	Initial Production Bbls.	Depth
INGLEWOOD—		
Ring Pet. Corp.'s Simons 1	*	4350

BELLEFLOWER—Dollar Oil Co.'s Blythe 1, dr shale 2930 ft.

CALABASAS—Easton and Smith's Morrison 1, 19-1-17, sd 2955 ft.

CHATSWORTH—Russell Pet. Co.'s Joughin 2, dr shale 765 ft.

COSTA MESA—Mesa Pet. Corp.'s B A. 1, dr hard sand 3375 ft.

DOWNEY—Associated Oil Co.'s Taylor 1, 33-2-12, dr gray sand 5535 ft. Rio Grande Oil Co.'s Adams 1, rig.

FULLERTON—Bastanchurry Ranch Co.'s 1, 21-3-10, rig.

GARDEN GROVE—Texas Ci.'s Crawford 1, dr hard sand 2900 ft.

HUNTINGTON BEACH—Western Drilling and Producing Co.'s 1, 18-6-10, dr sand and streaks shale 3655 ft.

INGLEWOOD—California-Eastern Oil Co.'s 1, dr 700 ft.

MONTEREY PARK—Monterey Park Pet. Co.'s Jepson 1, sd 3950 ft.

NEWHALL — California-Eastern Oil Co.'s Hasley 1, 5-4-17, dr shale and sand 2756 ft.

POMONA—Pomona Oil Assn's. Community 1, dr hard sand 950 ft.

PUENTE—Richfield's Didier 1, dr gray sand 2900 ft.

RIVERA—Empire Drilling Co.'s Purman 1, 14-2-12, dr sandy shale 4810 ft.

SAN FERNANDO—Shell's Mission 2, cmt. 6⅝-in cas 4325 ft, td 5690 ft, will test.

RIVERSIDE—Hall Pet. Co.'s Watt 1, 23-7-3, dr shale 975 ft.

SAN BERNARDINO COUNTY — Hesperia Oil and Gas Syn.'s 1-A, plugged to 2400 ft, will deepen. Western Pacific Oil Co.'s 3, dr shale 3260 ft.

SAN DIEGO COUNTY—Davenport Oil and Gas Co.'s San Marcos 1, dr hard sand 862 ft.

OKLAHOMA

WOODS COUNTY—T 28n, R 18w, Sec. 11, George Vincent et al's Freedom 1, c sw ponds.

GRANT COUNTY—T 28n, R 3w, Sec. 24, Lario O. & G. Co. et al's Connell 1, nwc, dr 345 ft.

HARPER COUNTY—T 27n, R 21w, Sec. 24, A. F. Kopisch Oil Co.'s Selman 1, nec se, spudded and sd.

WOODS COUNTY—T 27n, R 15w, Sec. 20, Sooner State Oil Co. & E. R. Black's Marcum 1, c sw spudded and sd.

GRANT COUNTY—T 26n, R 4w, Sec. 34, Sooner State Oil Co.'s Royce 1, swc nw, 550 ft.

KAY COUNTY—T 26n, R 2e, Sec. 32, J. A Vincent & Nat'l Union's McNeal 1, nwc n sd 2795 ft.

HARPER COUNTY—T 25n, R 22w, Sec 14, Hoffer Oil Co.'s Cooper 1, nwc se, s 4182 ft, litigation.

WOODS COUNTY—T 25n, R 15w, Sec. 1 Bu Vi Bar et al's 1, sec sw, rig.

GRANT COUNTY—T 25n, R 4w, Sec. 2 Cowden's Vollner 1, nec se ne sw, lost tool 5640 ft, sd.

TEXAS COUNTY—T 1n, R 18 E.C.M., Sec 11, Three Way Oil Co.'s Price 1, sec nw, hfw 3490 ft, sd.

WOODWARD COUNTY—T 24n, R 17w Sec. 32, Otstot Dev. Co.'s Simmons 1, sec, s 1500 ft.

WOODS COUNTY—T 24n, R 13w, Sec. 18 Miller et al's Copenhaver 1, nwc, spudded and sd.

GARFIELD COUNTY—T 24n, R 6w, Sec 9, Pulse & Beamer's White 1, sec nw, sd 4755 ft.

WOODWARD COUNTY—T 23n, R 20w Sec. 9, Billy Oil Co.'s Wyatt 1, c se, dr 800 ft. T 21n, R 21w, Sec. 25, Shanon's El more 1, swc, sd 3025 ft, rig blown down.

MAJOR COUNTY—T 20n, R 14w, Sec. 23 Keller et al's Horton 1, c ne ne, spudded and sd.

GARFIELD COUNTY—T 20n, R 4w, Sec 9, Marland Oil Co.'s Looman 1, nec se, sd 3735 ft, casing parted. Sec. 12, Marland Oil Co.'s Miller 1, swc, hfw 4586 ft, sd.

DEWEY COUNTY—T 18n, R 15w, Sec. 9, Huckelby & McCoy's Perfect 1, nec, fsh 4395 ft.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Haley & Consolidated Drlg. Co.'s Quier 1, sec sw fsh tools 3970 ft. T 18n, R 2w, Sec. 21, Tibbetts & Band's Donahue 1, swc nw se, show of oil at 5395-5405 ft, dr 5915 ft.

KINGFISHER COUNTY — T 16n, R 6w, Sec. 27, Crawford & McKenna's Sturgeon 1, nec sw, sd 4846 ft.

BLAINE COUNTY—T 15n, R 12w, Sec. 26, W. J. Donley's Dickens 1, sec ne, dr 4390 ft.

CANADIAN COUNTY—T 14n, R 6w, Sec. 9, A. D. Spears' Platt 1, swc ne, sd 3223 ft.

OKLAHOMA COUNTY—T 13n, R 3w, Sec. 18, Slick and Bailey's Lufkin 1, c ne se, dr 4570 ft. T 12n, R 3w, Sec. 15, Cromwell et al's Thompson 1, swc ne ne, dr 7038 ft. T 11n, R 3w, Sec. 24, I. T. I. O. Co.'s Park 1, c se se, est. 40 M gas 4793-4816 ft, td 6402 ft, sand 6382-6402 ft, flow 200 bbls per hour.

CANADIAN COUNTY—T 10n, R 6w, Sec. 1, J. V. Bailey's Robinson 1, c ne nw, spudded and sd.

OSAGE COUNTY—T 26n, R 6e, Sec. 25, White Eagle O. & R. C o.'s 1, swc ne, dr 2400 ft. T 22n, R 8e, Sec. 8, Harry McGill's 1, swc se, dr 1925 ft.

PAWNEE COUNTY—T 22n, R 5e, Sec. 33, Washoma O. & G. Co.'s Buffalo 1, sec nw dr 3530 ft.

LINCOLN COUNTY—T 16n, R 4e, Sec. 15, J. V. Bailey et al's House 1, c ne se, set 8-inch 3384 ft r.u.s.t. T 16n, R 6e, Sec. 19, Morgan & Flynn's Finley 1, swc, lcn. T 15n, R 6e, Sec. 23, Shaffer O. & R. Co. et al's Pinkston 1, nec sw, dr 3260 ft. T 12n, R 3e, Sec. 29, Phillips Pet. Co.'s Roberson 1, sec nw, rig. T 12n, R 6e, Sec. 10, Kingwood Oil Co.'s Jennings 1, swc, 4620-27 ft hfw plugging.

CREEK COUNTY—T 14n, R 9e, Sec. 1, Shaffer O. & R. Co.'s Polk 1, nwc ne se, Wilcox 3479-89 ft hfw, dry and abn. Sec. 10, Transcontinental Oil Co.'s Taylor 1, nwc sw se, dr 2980 ft. Sec. 26, T. Kelley et al's Anderson 1, swc se, dr 400 ft.

OKFUSKEE COUNTY—T 12n, R 9e, Sec. 30, Tidal Oil Co. et al's Barnett 1, sec ne ne, dr 1475 ft.

MUSKOGEE COUNTY—T 13n, R 18e, Sec. 33, L. T. Haynie's Linder 1, c se, show gas 2200-49 ft, sd 2290 ft.

McINTOSH COUNTY—T 12n, R 18e, Sec. 15, A. B. Wolfe et al's Beck 1, nwc se, spudded and sd.

PITTSBURGH COUNTY — T 9n, R 16e, Sec. 32, Pattison et al's McDuff 1, swc nw se, 3 M gas 4613-35 ft, Wilcox 5443-65 ft.

HASKELL COUNTY—T 9n, R 18e, Sec. 10, Marion Oil Co.'s Sanders 1, nwc ne sw, rebuilt rig, 1800 ft, sd.

PITTSBURGH COUNTY—T 6n, R 14e,

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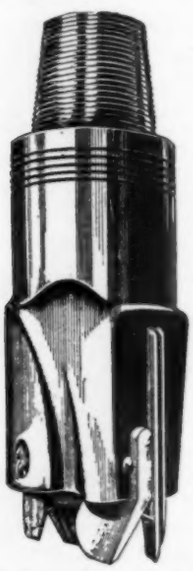

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Sec. 7, McAylor et al's Reed 1, nwc sw nw, sd 1103 ft, ½ M gas 788-95 ft.

LATIMER COUNTY—T 5n, R 18e, Sec. 15, Limestone O. & G. Co.'s Murray 1, swc, 1½ M gas 2518-22 ft.

SEMINOLE COUNTY—T 11n, R 6e, Sec. 27, Fuhrman Pet. Co.'s Fay 1, sec nw sw, set 6-inch 4644 ft.

OKFUSKEE COUNTY—T 11n, R 7e, Sec. 21, T. B. Slick's Wolfe 1, sec ne se, sd 2790 ft.

SEMINOLE COUNTY—T 11n, R 7e, Sec. 34, Phillips Pet. Co.'s Mill 1, nwc sw, sur pipe 78 ft. T 10n, R 7e, Sec. 5, Marland Oil Co.'s Strothers 1, nwc se ne, dr 3410 ft. Sec. 18, Shaffer O. & R. Co. et al's Jones 1, swc ne, ts 4705-10 ft hfw pb 3715 ft, fsh.

POTTAWATOMIE COUNTY—T 9n, R 4e, Sec. 11, Atlantic & Phillips' Bank 1, swc ne ne, dr 4595 ft, 1000 ft of water. T 9n, R 5e, Sec. 30, Magnolia Pet. Co.'s Germany 1, sec nw, ur 5-inch 4323 ft. T 8n, R 2e, Sec. 24, Superior Oil Corp.'s Jones 1, swc nw ne, fsh 4932 ft. T 8n, R 3e, Sec. 12, T. B. Slick's Nix 1, sec nw nw, dr 2670 ft. T 8n, R 4e, Sec. 15, Phillips Pet. Co.'s Sparkman 1, sec sw, td 4673 ft, hfw, d&a.

SEMINOLE COUNTY—T 8n, R 8e, Sec. 4, McCullough's McGilbray 1, swc ne, dr 1540 ft.

HUGHES CONUTY—T 8n, R 9e, Sec. 18, Pure Oil Co.'s Fixico 1, nec sw, td 4500 ft, hfw, d&a. T 8n, R 10e, Sec. 1, Bauer et al's Penn 1, nwc sw ne, td 4255 ft, hfw, d&a.

CLEVELAND COUNTY—T 7n, R 1w, Sec. 15, Sooner Oil Co.'s Vandeveer 1, nec nw sw, sd 3120 ft.

POTTAWATOMIE COUNTY—T 7n, R 2e, Sec. 17, T. B. Slick's Spangler 1, nwc se nw nw, dr 5940 ft. T 7n, R 5e, Sec. 14, Champlin Ref. Co.'s Harber 1, swc ne sw, dr 4367 ft, hfw. T 6n, R 5e, Sec. 17, Roxana Pet. Corp. et al's Lowe 1, swc nw ne, dr 4253 ft, water.

McCLAIN COUNTY—T 5n, R 3e, Sec. 29, Empire's Bonner 1, se nw nw, dr 4020 ft.

SEMINOLE COUNTY—T 5n, R 6e, Sec. 11, T. B. Slick's Harjo 1, nwc ne, sd 3853 ft.

HUGHES COUNTY—T 5n, R 9e, Sec. 17, E. W. Whitney's Huddleston 1, sec sw, show oil 2745-55 ft, sd 3000 ft.

PONTOTOC COUNTY—T 4n, R 4e, Sec. 20, Roxana Pet. Corp.'s Smith 1, nwc sw, td 2605 ft, hfw sd. T 4n, R 8e, Sec. 23, Independent's Hampton 1, nec se, lcn.

MURRAY COUNTY—T 1n, R 2e, Sec. 17, Revels & McGee's Wolfe 1, nwc, fsh 10-inch 1770 ft.

COAL COUNTY—T 1n, R 9e, Sec. 24, Galbreath et al's Jones 1, swc se, dr 2800 ft.

CUSTER COUNTY—T 14n, R 14w, Sec. 1, W. E. Witt's Wellman 1, cse sd 100 ft.

CADDO COUNTY—T 12n, R 11w, Sec. 15, Abernathy & Ashton's 1, c nw, dr 4584 ft.

ROGER MILLS COUNTY—T 11n, R 26w, Sec. 4, L. C. Hivick's Davis 1, c nw ne, sd 700 ft.

BECKHAM COUNTY—T 8n, R 25w, Sec. 1, E. L. Martin's Daly 1, c nw se, dr 2425 ft. T 8n, R 21w, Sec. 33, Day Oil Co.'s Ault 1, c nw nw, dr 926 ft.

KIOWA COUNTY—T 7n, R 16w, Sec. 26, Conner & Son's Geis 1, sec nw ne, sd 1712 ft. T 7n, R 15w, Sec. 35, Davis Malernee's Van Kirklan 1, nwc, sd 858 ft. T 6n, R 16w, Sec. 18, Alexander et al's Fuqua 1, swc ne, owdd, sand 428-440 ft, pumped 225 bbls in 31 hrs, sd for storage. T 6n, R 15w, Sec. 6, Johnson McDowell's 1, c sw ne, sd 2260 ft.

KIOWA COUNTY—T 6n, R 14w, Sec. 31, Sloan et al's Sloan 1, ne cor, lcn.

CADDO COUNTY—T 6n, R 12w, Sec. 29, W. J. Hartley's Gilbreath 1, se cor nw se, owdd, sd 3394 ft.

KIOWA COUNTY—T 5n, R 14w, Sec. 6, Russell & Sloan's Rushton 1, ne cor sw se, fsh 1235 ft.

COMANCHE COUNTY—T 4n, R 11w, Sec. 2, Wirt Franklin's Hollow 1, nw cor, show gas 1446-63 ft, dr 1551 ft.

JACKSON COUNTY—T 1n, R 20w, Sec. 4, Houseman et al's Northington 1, ne cor, sd 2020 ft.

KIOWA COUNTY—T 1n, R 17w, Sec. 13, Allen Bros.' Howell 1, nw cor se, dr 345 ft.

STEPHENS COUNTY—T 1n, R 7w, Sec. 2, Stahl & Burris' Jefferson 1, se cor ne nw, fsh 2466 ft.

JACKSON COUNTY—T 1s, R 20w, Sec. 33, Stanley McGregor's 1, sw cor nw sw, sd 2425 ft.

STEPHENS COUNTY—T 1s, R 7w, Sec. 12, Ilsing, Russell & Nance's Houston 1, ne cor sw sw, sd 1930 ft.

KIOWA COUNTY—T 2s, R 16w, Sec. 6, Landfair's 1, se cor sw se, dr 2535 ft.

TILLMAN COUNTY—T 3s, R 18w, Sec. 29, Dixie Oil Co.'s Harrison 1, ne cor nw, dr 700 ft.

COTTON COUNTY—T 3s, R 10w, Sec. 11, E. J. Stumpf's Jones 1, nw cor ne, lcn.

STEPHENS COUNTY—T 3s, R 8w, Sec. 26, E. J. Stumpf's Simon 1, sw cor, rig.

COTTON COUNTY—T 4s, R 12w, Sec. 16, Guiler & Pyson's Thomas 1, se cor sw, show oil and gas 1252-54 ft, sd 2127 ft.

TILLMAN COUNTY—T 5s, R 15w, Sec. 3, A. M. Pearson's Indian 2, sw cor (twin No. 1), td 3207 ft, dry and abn.

JOHNSTON COUNTY—T 1s, R 7e, Sec. 29, Smithy & Kinsley's Lane 1, se cor ne, sd 1306 ft.

CARTER COUNTY—T 4s, R 2e, Sec. 32, Texokla Drlg. Co.'s Anderson 1, se ne se, spudded and sd. T 5s, R 3w, Sec. 19, Devonian Oil Co.'s Myer 1, nw cor se, rig.

BRYAN COUNTY—T 9s, R 9e, Sec. 36, W. G. Endicott's Craig 1, c nw ne, dr 830 ft.

ARKANSAS

Completion

Company, Well and Location	Initial Production Bbls.	Depth
UNION COUNTY—		
Imperial O. & G. Co.'s Goodwin 1, 26-17-16	‡	3139

ASHLEY COUNTY—Texas Co.'s Keefer 1, 11-18-4, rig up. C. E. Harris et al's Holmes 1, 9-16-7, sd 151 ft.

BRADLEY COUNTY—Ohio Oil Co.'s Sou. Lbr. Co. 2, 19-16-9, dr 1250 ft.

CALHOUN COUNTY—Joe Hurley's Ark. Land & Timber Co. 1, 29-16-12, cored sand showing oil 2304 to 2314 ft, will set 6⅝ cas.

CLARK COUNTY — Wm. Henry, Tr.'s Clark 1, 34-9-21. sd 1385 ft.

CHICOT COUNTY—W. S. Smith's Mayer 1, 14-19-2, sd 850 ft. Joe Crawford's Cashion 1, 14-18-2, ds stuck, td 2330 ft.

COLUMBIA COUNTY—G. W. Dawley et al's Fullenwider & Kitchen 1, 12-17-22, sd wo 2847 ft.

DALLAS COUNTY — Robt. H. Dedman's Hillman 1, 20-10-13, temp abn 1145 ft.

FAULKNER COUNTY—Gold Creek O. & G. Co.'s Stermer 1, 17-4-13, sd 3462 ft.

FRANKLIN COUNTY — Ozark Nat. Gas McElroy 1, 15-8-27, lcn.

GARLAND COUNTY—H. H. Given's Garrett 1, 1-13-19w, temp abn 2800 ft.

LOGAN COUNTY—Ark. Nat. Gas Corp.'s W. H. Parks 1, 26-8-24, trying to get by 8-in csg 2361 ft, td 3208 ft.

MILLER COUNTY—E. A. Martin, Tr.'s, Dale 4, 23-15-26, dr 2325 ft.

OUACHITA COUNTY — McDonald Bros.' Wilson 1, 25-15-18, skidded dk 50 ft north old hole, dr 2010 ft. Little Fay Oil Co.'s H. Primm 3, 24-15-16, will pump, td 2084 ft; Canada 1, 24-15-16, dk.

UNION COUNTY—J. P. Hawkins et al's Goodwin 1, 6-17-15, sd 616 ft, (correct). Imperial O. & G. Co.'s Goodwin 1, 26-17-16, tested sw through ds, 3130-39 ft, abn, (third completion). Tharpe Drilling Co.'s List 1, 25-17-15, sd 3050 ft. Foster et al's Murphy Land Co. 1, 22-17-17, rig up, wo. Calgo Oil Co.'s Primm 1, 9-18-17, sd wo, 3600 ft. McDonald Bros.' Mayfield 1, 29-19-15, sd 1990 ft. Sam Sklar, Tr.'s Fitzgerald 10, 8-18-15, cmtd 6-in csg 2142 ft. Stark et al's Powell 1, 35-18-15, dr 3370 ft. Grimes Bros.' Hill 2, 7-18-14, rig up wo. Tate & Morefield's W. W. Smith 1, 6-18-13, sd 3226 ft. J. C. Marcum's DeYambert 1, 5-19-4, dr 2620 ft.

NORTH LOUISIANA

Completions

Company, Well and Location	Initial Production Bbls.	Depth
BOSSIER PARISH—		
Triangle Drilling Co., Bulkley 1, 9-20-13	‡	4558
CADDO PARISH—		
Tidal Oil Co., McGrary 1, 23-19-16	‡	2500
SABINE PARISH—		
Texas Co., Hamlin 1, 28-10-13	*	4304

BIENVILLE PARISH—W. G. Gray, Tr.'s,

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During the year now drawing to a close, Lucey Rotary Products have been used intensively in widely scattered fields throughout the world. Under the various conditions encountered, they have once more demonstrated to drillers, old and new, their outstanding ruggedness, efficiency, and economy in service.

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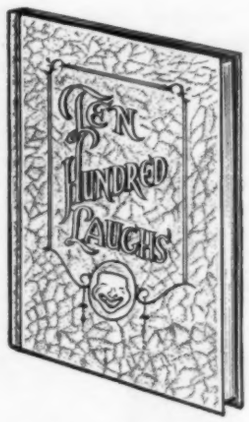

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Johnson 1, 21-18-6, dr 2363 ft. W. P. Wallace's Ashley 1, 15-16-10, dr 1750 ft.

BOSSIER PARISH — Big Ben Oil Co.'s Stewart 2, 15-18-12, rig up wo. Doern et al's Bolinger 1, 9-22-11, sd 4317 ft. Nell & Lanier's Biedenharn 1, 23-21-14, lcn. Walker et al's Antrim 1, 28-22-13, sd 2985 ft. Triangle Drilling Co.'s Bulkley 1, 9-20-13, salt water, abn 4558 ft.

CADDO PARISH—Tidal Oil Co.'s McGrary 1, 23-19-16, salt water, abn 2500 ft.

CATAHOULA PARISH—Lochnager O. & G. Co.'s Taliaferro 1, 26-9-6e, sd 900 ft.

CLAIBORNE PARISH — Dixie Oil Co.'s Gilbert 1, 27-21-5w, cmtd 6⅝-inch csg gull string 4201 ft, coring 4225 ft. El Dorado Chief Oil Co.'s Baker 1, 26-20-7, cored from 2088 to 2092 ft, limer ock. Smitherman & McDonald's Miller 1, 17-23-8, arr to set 7-inch csg 4190 ft.

DE SOTO PARISH — Benedum & Trees' State 1, 22-14-12, sd wtg fuel to deepen, td 2632 tf. Benson O. & G. Co.'s Jackson 1, 3-10-13, rig up. Luke Case, Tr.'s, Boatright 1, 3-10-13, rebuilding dk td 1810 ft. Carlton Drilling Co.'s Stephens 2, 12-11-16, sd 350 ft. R. O. Roy's Sample 1, 1-13-14, rig up. Whittaker 1, 4-13-13, sd wo 2864 ft. Thorn Oil Co.'s Burford 1, 22-14-14, rig up. Warren & Carruthers' Ramsey 1, 33-13-16, dr 2315 ft.

EAST CARROLL PARISH—Palmer Corp.'s Mitchiner 1, 8-19-11e, dr 300 ft.

FRANKLIN PARISH—Davis et al's Moore 1, 12-11-6e, sd 1000 ft.

MADISON PARISH — Mid-American Pet. Co.'s Yerger 2, 51-16-14e, sd 285 ft.

NATCHITOCHES PARISH—Robeline O. & G. Co.'s Cassady 1, 7-8-9w, sd 1100 ft.

OUACHITA PARISH—G. E. Jordan's Wall 1, 12-18-3e, sd 3347 ft. Ouachita Nat. Gas Co.'s A'Arbonne B-2, 25-19-2e, dr 3310 ft (corrected depth). Phillips et al's School Fee 1, 16-16-4e, dr 2490 ft.

RAPIDES PARISH — G. E. Silbertson's Willemach 3, 13-5n-4w, sd 2250 ft. Glanmora Pet. Co.'s Fee 1, 1-2n-2w, sd 3850 ft.

RICHLAND PARISH—Wilson et al's Buie 1, 17-15-7e, rig up. Richland Operating Co.'s Chapman 1, 19-16-7e, dr 30 ft.

SABINE PARISH—Texas Co.'s Hamlin 1, 28-10-13, dry, abn, td 4304 ft. W. J. Garnier's Bowman-Hicks 1, 16-7-12, dr 500 ft. R. L. Gay, Tr's Bowman-Hicks 2, 14-7-14, rig up. Sabine Lbr. Co. 1, 13-7-14, rig up.

TENSAS PARISH—Enochs et al's Curry 1, 39-11-12e, sd 3583 ft.

UNION PARISH—G. E. Carmatte's Tugwell 2, 21-22-1e, dk. Carter & Wingfield's Clark A-3, 8-23-1e, dk. Hudson 2, 7-23-1e, sd 2190 ft.; Hudson 3, 7-23-1e, sd wo 2278 ft; Security Trust 2, 7-23-1e, lcn. H. C. McDonald's Union Sawmill 2, 18-23-1e, sd wo 1500 ft.

WEBSTER PARISH—Robt. Elmore's Mitchell 1, 31-23-9, dr 2250 ft. Jones et al's Elkins 1, 33-23-9, temp abn 2690 ft. Magnolia Pet. Co.'s H. H. Branton 1, 5-22-9, dr 2545 ft; M. Branton 1, 5-22-9, set 8⅛-in csk 2619 ft. Scroggins 1, 1-22-11, 1500 ft oil stnd in hole, will pump, td 2709 ft. Harry Morris' Lewis 1, 15-23-9, sd 2902 ft. Northwest La. Gas Co.'s Pinewoods Lbr. Co. 9, 37-23-11, dr 1520 ft.

EAST TEXAS

BOWIE COUNTY—Hooks O. & G. Co.'s Rosenberg 1, King sur, temp abn, td 3086 ft.

CAMP COUNTY—Rogers et al's Engelt 1, Montgomery sur, sd wo 1978 ft.

CASS COUNTY—Davis & Pigg's Ed Lambert 1, Lamber sur, sd wo 1952 ft.

RED RIVER COUNTY — Shad Harper's Garland 1, Jos. Wagley sur, sd wt fuel, td 1590 ft. D. M. Buffington's Hoosier 1, Hughart sur, dr 1105 ft. Johnson Pet. Co.'s Randolph 2, Dean sur, dr 1425 ft.

SHELBY COUNTY—Chapparal Oil Co.'s Holt 2, Matthew Moore sur, dr 2635 ft. Gulf Refining Co.'s Caraway 1, Patterson sur, set 15½-in csg 113 ft.

UPSHUR COUNTY—F. S. Freeland's Newsom 1, Butler sur, arr d.s. test 2020 ft. Hudspeth 1, Jackson sur, dk pat.

KANSAS

BARBER COUNTY — Barbara Oil Co.'s Blunk 1, C ne nw 20-34-13w, st reaming 4755 ft. Roland et al's Pickens 1, ne nw ne 27-30-14w, sd 4180 ft.

BUTLER COUNTY—LaRobb et al's Bronsenger 1, ne se 4-27-3, ru. Barnsdall's Means 1, nw sw 34-27-2e, d 1010 ft.

CHASE COUNTY—Grisner & Fowler's Carson 1, ne ne 9-21-7, sd 3150 ft.

COWLEY COUNTY—Pyle & Sutter's Lind-

strum 1, se ne 9-35-4e, sd 1410. Empire-Marland-Twin State's Feaster 1, nw ne 36-32-5e, sd 3097 ft. Wakefield & Osborne, Osborne 1, nw ne 18-30-5e, rig.

EDWARDS COUNTY — Amerada-Wilcox, Teansel 1, nw cor 32-25-19w, sd 3780 ft.

ELLIS COUNTY—Rush Oil Co.'s Gatewood 1, nw nw 4-15-20w, csg 500 ft. Finney & Weimer's Freeman 1, nw se se 24-15-20w, spd. Empire's Wann 1, ne 31-12-19w, 8-in csg 3104 ft. Marland's Vine 1, sw se 27-11-9w, sd 3240 ft. Transcontinental's Boetcher 1, nw se sw 21-13-19w, sd 3662. Phillip's Brull 1, c nw¼ 34-14-17w, d 200 ft. Phillip's Shutts 1, c ne¼ 5-12s-17w, prod 250 bbls day. Phillips' Schmeider 1, nw cor 29-12-17w, ru. Labette Oil Co.'s Urbank 1, ne nw nw 19-15-16w, td 3060 ft. T. B. Slick's Craig 1, c nw ne 8-11-16w, d&a 3545 ft. Thomas Moncrief's Johnson 1, sw ne 9-13-19w, ru. Derby & Empire's Krause 1, se nw se 17-14-19w, d 3660 ft. Davis & Hazlett's Weiland 1, nec 1-13-16w, ru.

GREENWOOD COUNTY—P. H. Ballieu's Bright 1, ne sw 22-27-12, sd 1210 ft.

HARPER COUNTY—Amerada's Mendiville 1, c se se 24-34-6w, co 5353 ft.

HARVEY COUNTY — Margaret Gay Oil Co.'s Groue 1, nw ne nw 29-23-1w, timbers.

JEFFERSON COUNTY—Wichita Oil Co.'s Simpson 1, nw sw sw 19-10-17, ru sd.

LANE COUNTY—Robinson et al's Dickerson 1, sw nw se 11-18-27w, 8-in 2625 ft.

MARION COUNTY—Empire's Jensen 1, se nw 26-22-5e, csg 2405 ft.

MARSHALL COUNTY—Irwin et al's Cooper 1, ne nw 10-3-7e, spd.

MITCHELL COUNTY—Ben Gurley et al's Crombil 1, c ne ne 32-9-7w, d 3830 ft.

MORRIS COUNTY—Hugh Faulder's Wendt 1, sw se se 19-15-5e, rig. Skelton et al's Iles 1, nw nw 25-16-5e, rig.

McPHERSON COUNTY — McPherson Co. Gas Co.'s Stein 1, sw ne sw 17-18-1w, td 2911 ft. McPherson Co. Gas Co.'s Gustafson 1, c ne¼ 9-17-2w, dr 3343. Ted Washabaugh's Vosahell 1, ne ne 9-21-3w, 10-in csg 1740 ft.

OTTAWA COUNTY—Anderson et al's Bank 1, ne nw 28-10-2w, sd 2820 ft.

PAWNEE COUNTY—F. C. Troupe's Lovett 1, cel ne ne 31-21-16w, sd 1560 ft.

PHILLIPS COUNTY—Watsonian Oil Co.'s Marklein 1, ne sw 21-3-19w, sd 3015.

RICE COUNTY—Allison & Fitzwilliams' Poland 1, ne sw ne 36-19-8w, cellar.

ROOKS COUNTY—Krueger et al's Poore 1, ne ne 14-8-16w, sd 3230 ft. Prairie's Sandberg 1, c sw¼ 20-9-18w, rig. Prairie's Gick 1, c se 22-9-19w, rig.

RUSH COUNTY—Danciger O. & R. Co.'s Pinonka 1, c ne 17-19-17w, timbers. Sinclair's Beiching 1, nw ne nw 9-16-16w, sd 3286 ft.

RUSSELL COUNTY — Midwest Ex. Co.'s Austin 1, ne ne 36-12-16w, td 3105, 70 bbls.

SALINE COUNTY—M. Esty et al's Peterson 1, c ne 6-16-5w, spd sd. Nathan-Jones et al's Robertson 1, nw sw 27-14-2w, d 2650 ft.

SEDGWICK COUNTY—LaRobb Oil Co.'s Davis 1, ne sw se 36-25-1w, ur 3260 ft. Bu-Vi-Bar Pet. Co.'s Steel 1, se cor 1-26-2w, sd 3080 ft. Barnsdall's Samuels 1, ne nw 24-25-1e, d 1575 ft; Faber 1, sw nw 6-27-1w, d 2750 ft. Van Zandt & Mason's Fox 1, c nw sw 19-25-1w, d 2750 ft. Connell Oil Co.'s Cross 1, ne cor 27-25-1e, sd 2650 ft. Morgan et al's Corn 1, sw ne 28-25-1w, rig. Kyser et al's Stroot 1, sw sw 8-26-1w, ru.

SHERMAN COUNTY—A. L. Henson et al's Murray 1, ne se nw 22-7-40w, sd 3035 ft.

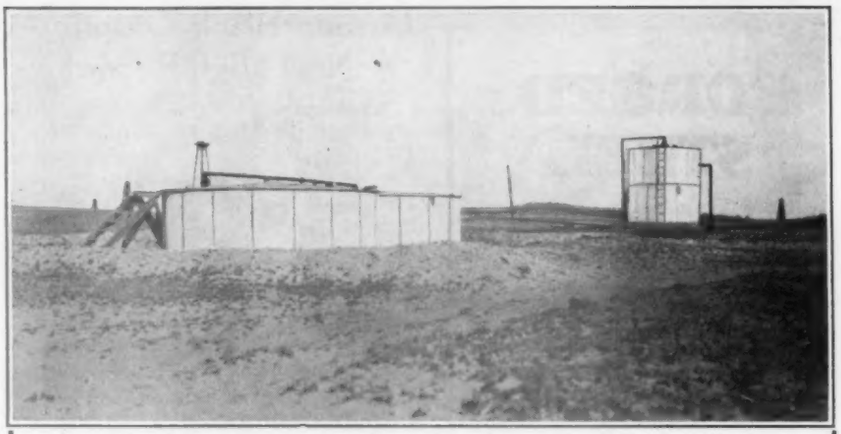
STEPHENS COUNTY—W. Sidwell et al's Kelly 1, sw ne 16-34-38w, sd 1160 ft. Trees Oil Co.'s Unknown 1, sw ne sw 3-35-38w, skdg rig.

SUMNER COUNTY—Geo. Dickey's Know 1, sw ne 3-35-1w, Wilcox 4244-48 ft HFW d&a. Gypsy's Williams 1, nw se sw 16-35-3w, d 4300 ft. McCulloch et al's Tuttle 1, sw ne 29-34-1w, rust 4160 ft. Otstot et al's Volker 1, nw ne 9-35-1e, rig. Helmerick & Payne's Warlick 1, se ne 8-34-2e, d 3765 ft. Davidson et al's Strickland 1, sw se 12-35-1w, rig.

SMITH COUNTY — Mid-Kansas' Bank 1, nec 4-2s-13w, rig.

TREGO COUNTY—Central Commercial Oil Co.'s Ellis 1, ne sw ne 20-13-21w, d 3030 ft.

WASHINGTON COUNTY—McCool & Vincent's Linn 1, nw ne 27-4-3e, ru.



Two 500-Barrel Low Type Maloneys and one 500-Barrel Maloney Flow Tank used by the White & Lane Oil Co., Cockrell Ranch, Pampa, Texas

Tight MALONEYS
Mean Top Price for Stored Oil

The unusual *tightness* of MALONEYS means that oil stored in these tanks will bring top price because the gravity will not be reduced by excessive evaporation. This tightness is secured by exclusive MALONEY features which include our patented "crimp" seams and joints, our special pliable rubber packing and our Gaso cement.

Among other factors in MALONEY superiority are: rust-resisting Keystone Copper Steel sheets of amply heavy gauge; special bolts of 90,000 pounds tensile strength rigid steel channels reinforcing seams; large cleaning out plates set flush with bottoms; Maloney special pearl gray paint; the best and latest types of valves and thief hatches.

"Alone in Quality"

MALONEY TANK MFG. CO.

TULSA, OKLA., U. S. A.

Distributors at All Principal Petroleum Points

Sizes: 12 to 10,000 Barrels

Packed in Steel-Bound Crates for Export

Howell Aluminum "4-in-1" Vacuum Pressure Valve and Thief-Hatch—The BEST and LATEST Deck Equipment—POSITIVE Safety.

MADE OF KEYSTONE COPPER STEEL — MALONEY PATENTED BOLTED COPPER-STEEL TANKS — MADE OF KEYSTONE COPPER STEEL

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FORGED STEEL

VALVES
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The Tret-O-lite Process is a fundamentally simple and direct method of correcting the chemical condition present in "cut oil". Treatment with Tret-O-lite causes the petroleum and water to separate *quickly* and *completely*. Cost of treatment is exceedingly low. Let us send our nearest field expert to see you.

Process Patented

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St. Louis, Mo.
Offices and Plant:
Webster Groves, St. Louis County, Mo.

Carbon Black Output At New High Record

Washington, D. C.—According to a report of the U. S. Bureau of Mines, Department of Commerce, the production of carbon black in 1927 aggregated 198,429,000 pounds—an increase over 1926 of 17,853,000 pounds. This is a new high record in the production of carbon black for any one year. The production had a total value of $10,955,000, or an average of 5.5 cents a pound.

The year 1927 witnessed material expansion in the carbon black industry, total sales amounting to 223,430,000 pounds, which was an increase of 33.4 per cent. over the preceding year. The brisk demand for carbon black had a material influence on stocks held at plants which, for the first time since 1922 showed a decrease. On December 31, 1927, stocks of carbon black amounted to 124,188,000, as compared with 130,377,000 pounds on December 31, 1926. Louisiana maintained its position as the center of the carbon black industry, although the production of that state declined from 130,377,000 pounds in 1926 to 124,188,000 pounds in 1927. Texas, however, deserves the greater part of the credit for the record output of 1927. This state produced 56,396,000 pounds in 1927, an increase of the preceding year of more than 20 million pounds. 144,087,000,000 cubic feet of natural gas was consumed in the manufacture of carbon black during 1927, and the average yield was 1.4 pounds per thousand cubic feet.

Mexia, Texas.—The Humble Pipe Line Company plans to remove its district headquarters from Corsicana to Mexia, and has leased a suite of offices in the Hughes Building here in preparation for the move.

Little Progress Shown In Czechoslovakia

Prague, Czechoslovakia. — According to a report made by the office of the commercial attache, Prague, little progress has been made in the development of new oil fields in Czechoslovakia. Although the potential oil-bearing area of this country has been estimated at 45,000 square kilometers, less than 10 are actually productive at present. Private enterprise has been discouraged by the law of March 22, 1920, which declared that all of the oil lands of the republic comprised a government monopoly and vested the power of granting concessions to private companies in the ministry of public works.

Domestic production of petroleum has declined from 23,352 metric tons in 1925 to 16,474 in 1927. The total number of wells drilled in the republic during the past three years is not recorded, but data obtained from the two producing enterprises and two non-producing companies show that the number is increasing. Since 1914, discovery of oil at Gbely, the most productive field until a few years ago, 216 wells have been drilled there, of which 158 were producing in 1927. The most recently drilled well, opened in October at Hodonin, has a depth of only 43 meters and promises to be very productive. Drilling is being continued on this well in the expectation of increasing the output by reaching a second oil stratum.

El Paso To Have Natural Gas Supply

El Paso, Texas.—The El Paso Natural Gas Company has been formed under the laws of Delaware, to construct, own and operate a 16-inch pipe line, approximately 200 miles long, to supply public utility and industrial companies in El Paso, and adjacent territory with natural gas. The gas supply will be obtained from Lea County, New Mexico and the construction contract calls for completion on or before May 1, 1929.

The new company has contracted for a gas supply from the Texas Production Company, Amerada Petroleum Corporation, Columbian Carbon Company, and the Midwest Refining Company, producers of natural gas in Lea County, New Mexico. Reserves are said to be sufficient to supply the company's anticipated requirements for more than 30 years. The company will also supply natural gas to the Texas Cities Gas Company, for resale to the latter's retail and other customers in El Paso and adjacent territory. These contracts, it is estimated, will average not less than 14,800,000 cubic feet daily.

Houston.—The Texas-Empire Pipe Line Company has awarded the entire contract for the pipe for its Oklahoma-Chicago line to the A. O. Smith Corporation of Milwaukee.

This line will cost $15,000,000 it is estimated. It will be 636 miles long, of 12¾-inch pipe, weighing approximately 40 pounds to the foot, making a total of 3,358,000 feet, and a total tonnage of 72,000 tons, or 2800 carloads. This makes 100 trainloads to be shipped.

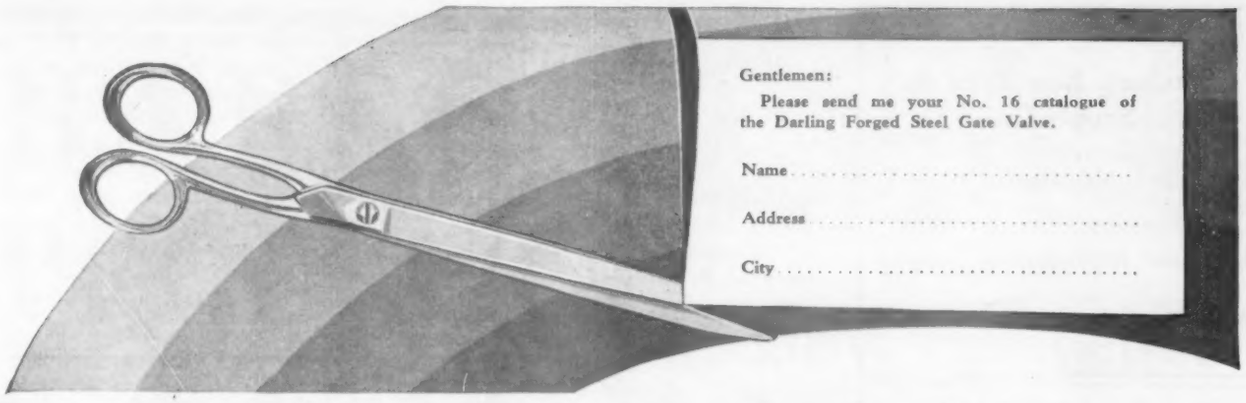
Texas Royalty Owners Form Association

Tulsa.—The Texas Division of the Mid-Continent Royalty Owners Association will be organized at Fort Worth on January 10, according to an announcement from the Association's general headquarters in Tulsa.

The Winkler County Royalty Owners Association will meet in Fort Worth at the same time and form the nucleus of the new division.

Consolidation of the Texas royalty owners group with the Mid-Continent Royalty Owners Association was brought about after the directors of both associations had found that the interests of the two were practically the same.

Steps will be taken at the Fort Worth meeting to combat the present practice of many Texas counties of determining valuation of properties for taxation purposes.



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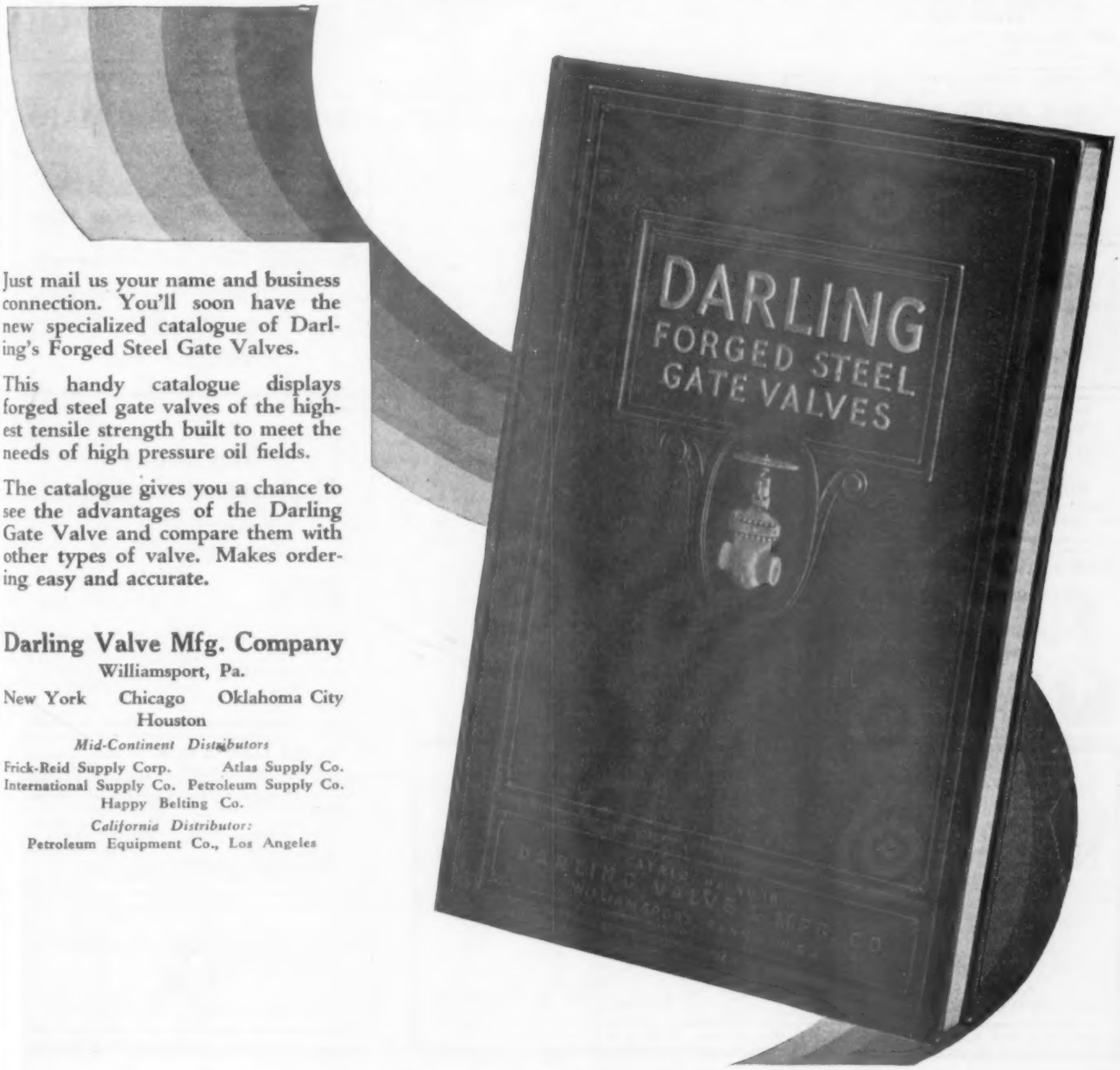
For Quick Accurate Ordering—

A Special Catalogue of Gate Valves Built for High Pressure Oil Field Work



Just mail us your name and business connection. You'll soon have the new specialized catalogue of Darling's Forged Steel Gate Valves.

This handy catalogue displays forged steel gate valves of the highest tensile strength built to meet the needs of high pressure oil fields.

The catalogue gives you a chance to see the advantages of the Darling Gate Valve and compare them with other types of valve. Makes ordering easy and accurate.

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Oil Men Organize Section of Aeronautical Body

Chicago. — A permanent section on fuel and lubrication was organized in the Aeronautical Chamber of Commerce of America, December 3 at the Stevens hotel, Chicago, where the A. C. C. convened coincidentally with the American Petroleum Institute.

The organization of the section includes the chairman, Frank J. Shipman of The Texas Company, New York; the secretary, John Proctor of the A. C. C. staff; and the following regional vice-presidents: Sidney Bevin, Tide Water Oil Company, New York, representing the eastern division; I. H. Shearer, Kendall Refining Company, Bradford, Pennsylvania, representing the north-central division; D. P. Barnard, Standard Oil Company of Indiana, Chicago, representing the Great Lakes division; F. L. Foster, Naturaline Company of America, Tulsa, representing the south-central division; Dudley Steele, Richfield Oil Company, Los Angeles, for the southwestern division; and Emery Bronte, Associated Oil Company, San Francisco, for the northwestern division.

Two main topics—fuel for high compression motors, and lubrication for aviation motors—occupied the discussion at the organization meeting. As a result of the discussion, it was decided not to set up any research or technical laboratory and not to establish a committee corresponding to the one on standards for fuel and lubrication.

Members on the fuel committee include: F. L. Foster, and E. E. Aldrin, Standard Oil Company of New Jersey. The lubrication committee includes: R. H. Mozier, Tide Water Oil Company, New York, and I. H. Shearer. The former committee was instructed to keep in touch with research and developments in airplane fuel by the S. A. E., the Co-operative Fuel Research Steering committee, the Army, the Navy and other organizations at work on the problem. The lubrication committee was instructed to impress upon manufacturers the importance of agreeing one some standard of lubricating oils.

As a result of the co-operation of the chairman, Mr. Shipman, with the general committee of the A. P. I. on a code of ethics, a paragraph in Rule 1 of the approved code says: "On account of the special nature of service required in supplying petroleum products to airports, no dispensing or storage equipment of any kind shall be leased, loaned, or otherwise furnished, to airports, operators or resellers of petroleum products, except at full cost, including cost of equipment and storage installation."

WANTED—First class production man thoroughly experienced in Ohio, Pennsylvania or West Virginia fields. He must be competent to take entire charge of the field operations of the company which is planning an immediate increase in production from its present proven properties owned in fee. An attractive basis for compensation will be arranged with the man selected. Letters in reply which will be held strictly confidential should give complete data including age, experience and training. Box 60 c-o Oil Weekly.

HEYDRICK'S NEW MAPS
WEST TEXAS
County Maps
Combination Maps
Descriptions and prices on application
HEYDRICK MAPPING COMPANY
Wichita Falls, Texas

McCollum Exploration Company
Contracts taken for Seismograph Work

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BARSCO PRODUCTS

—for Oil and Gas Well Drilling

—here's a stronger and more rigid Gas Packing Clamp—

Here's another proof that BARSCO products are built better—*two extra strong bolts* (instead of the usual one) *at either end*—greater rigidity, therefore longer life.

Specifications on Gas Packing Clamps with Gas Outlet

Size, Inches	Size Gas Outlet	Weight, Pounds
6¼x 4½	1½ or 2	120
6⅝x 4½	1½ or 2	130
6⅝x5-3/16	1½ or 2	120
7⅝x 5⅝	1½ or 2	150
8¼x5-3/16	1½ or 2	160
8¼x5-3/16	2½ or 3	155
8¼x 6¼	1½ or 2	160
8¼x 6¼	2½ or 3	180
8¼x 6⅝	1½ or 2	155
8¼x 6⅝	2½ or 3	190
9⅝x 7⅛	1½ or 2	195
9⅝x 7⅛	2½ or 3	240
10 x 6⅝	1½ or 2	230
10 x 6⅝	2½ or 3	290
10 x 8¼	1½ or 2	200
10 x 8¼	2½ or 3	250
11¾x 9⅝	1½ or 2	245
11¾x 9⅝	2½ or 3	320
12½x 8¼	1½ or 2	310
12½x 8¼	2½ or 3	390
12½x10	1½ or 2	250
12½x10	2½ or 3	330
13¾x12½	1½ or 2	300
13¾x12½	2½ or 3	380
15½x12½	1½ or 2	370
15½x12½	2½ or 3	465
15¾x13½	1½ or 2	350
15¾x13½	2½ or 3	440

BARSCO also builds Gas Packing Clamps—regular pattern, without gas outlets.

Bartlesville Supply Company of Missouri
3400 MAURY AVENUE—ST. LOUIS, MISSOURI
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Oklahoma Warehouse:
Tulsa—J. H. Kountz, 218 East Brady St.
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BARSCO PRODUCTS
for oil and gas well drilling. Drive Shoes—Casing Shoes—Die Nipples—Rotary Tool Joints—Braden Heads—Rubber Swabs—Gas Packing Clamps—Anchor and Tubing Clamps—Stop Cocks. Write for complete catalog.

A. P. I. Rotary Taper Gages

How can better gages be made?

Who would make them? Where can we find men who have had more long years of experience than our craftsmen; in the intimate study of steel and heat treatment; in designing and making all kinds of gages and in measuring the finest commercial dimensions down to millionths of an inch?

The American Petroleum Institute trusted Pratt & Whitney with the orders for the master gages for the Institute. You, in turn, may trust their choice.

Years of time, large sums of money, countless hours of thought have been expended to make P & W Gages not only accurate but endowed with a long life of accuracy.

Write for a new catalog showing P & W Oil Country Gages.

PRATT & WHITNEY CO.
Hartford, Connecticut
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Pratt & Whitney Oil Country Gages include:
Plain and Upset Oil Well Tubing Gages
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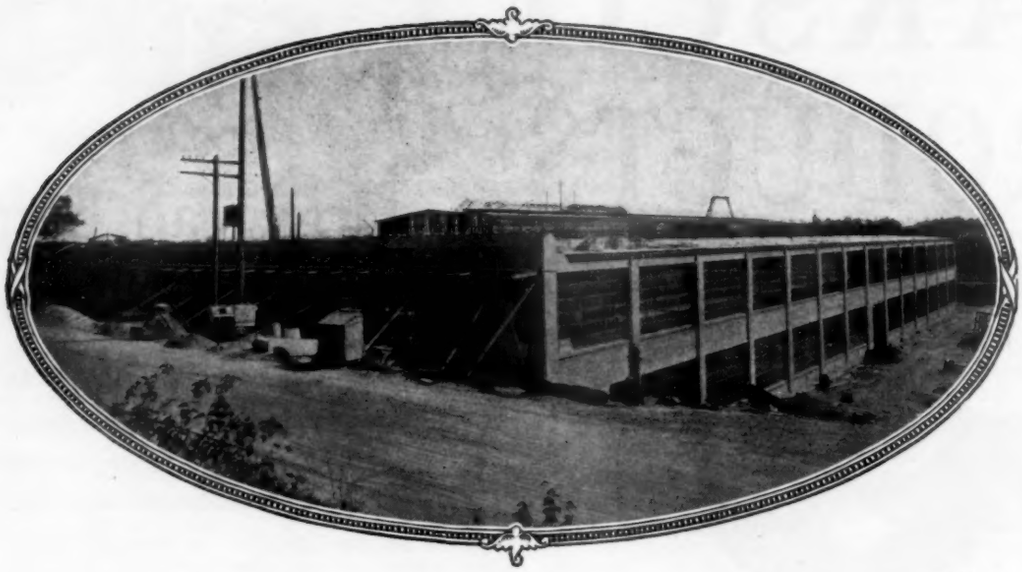
Plain and Upset Casing Gages
Rotary Taper Joint Gages, Line Pipe Gages
Sucker Rod Gages, Fishtail Bit Gages
Write for information



p-869-L

At Your Service

a new plant, new engines, new facilities

New plant extensions that increase the floor area 100%, for additional production facilities---adequate service department facilities for greater stocks and prompter shipments --- and proving laboratories for both research and production engines will soon be in full operation. We offer these new buildings as our contribution to your business and as evidence of our faith in your continued and greater future success.

"L-Head Engines—They take better care of themselves."

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WAUKESHA MOTOR COMPANY

Waukesha **Wisconsin**

New York	Tulsa	Houston	San Francisco
8 W. 40th St.	C. F. Camp Co.	Portable Rig Co.	C. A. Watts

Exclusive Builders of Heavy Duty Gasoline Engines for Over Twenty Years

NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS

Non-Corrosive Spark Plug

SOOTLESS SPARKPLUG COMPANY

The Sootless Spark Plug Company, 247 Atlantic Avenue, Boston, has announced a new non-corrosive Spark Plug for use in areas having difficulty with acid contaminated gases. Basically, the plug is of the regular Sootless design, using mica for insulation and having extremely high nickel content electrodes. The advantage of the new plug over the ordinary brass Sootless plug is that all metal parts carry a deep coating of non-corrosive metal, mainly chromium. This coating extends inside the shell, resulting in complete protection.

Additional information can be secured direct from the company or from the Magneto Ignition Corporation of Tulsa.

Wagner Catalog

Wagner Electric Corporation of St. Louis has just issued a new 52-page catalog describing Wagner distribution transformers in single-phase and three-phase, pole-type and subway-type, in ratings up to and including 500 Kv-a.

One half of the catalog is devoted to a detailed description of the design and construction of Wagner distribution transformers and the remainder of the catalog is devoted to ratings, shipping weights, prices, etc.

Anyone interested in receiving a copy of this 52-page catalog should address Wagner Electric Corporation, St. Louis, Missouri, and asks for Bulletin 160.

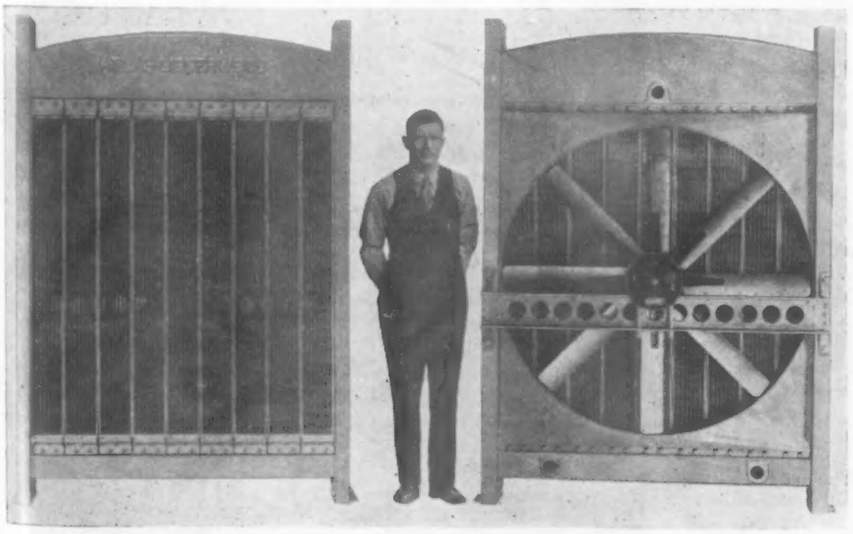
New Type Heavy-Duty Radiator

YOUNG RADIATOR COMPANY

Young Radiator Company, Racine, Wisconsin, has recently placed on the market a new type of heavy duty radiator for large Diesel and oil engines. The fan, as is shown at the right in the accompanying illlustration, is mounted direct on the radiator, making it an integral part of the radiator and relieving the fan of vibration. The unit cools a 200 horsepower Atlas Imperial Diesel engine, and is made in various capacities and sizes suitable for all sizes or makes of Diesels, stationary and portable, for export or domestic use in temperate or tropical climates.

The radiator sides are made of heavy structural steel, the top and bottom tanks of cast iron, and all parts built in proportion to the work and strains it is subjected to in the excavator, dragline, shovel, logging and oil field heavy type work.

The core construction has patented designed sections, eliminating vibration and shimmying of these parts and subsequent leakage and failure. Larger tubes allow a larger volume of water to pass through the cores, and eliminates many clogging problems.



Young Radiator

Wickwire Sales Company

Wickwire Spencer Steel Company has announced the organization of the Wickwire Sales Corporation. This company was organized to take over the distribution and sale of Wickwire Spencer Steel Products for the Mid-Continent field and other territories.

Wickwire Spencer Sales Corporation have opened a district office at 1310 Philtower Building, Tulsa, in charge of John J. Levell. Dean Rollins will be credit manager. Both Mr. Rollins and Mr. Levell were formerly with the International Supply Company.

O. C. Elliot will work out of the Tulsa office as salesman and adjuster through Oklahoma and Kansas. Mr. Elliot has been connected with Wickwire Spencer Steel Company for two years. R. J. Jones, Jr., Abilene, will work as salesman and adjuster in Texas. Mr. Jones has been with the parent company for the past two years. L. R. Austin, Wichita, Kansas, will work as salesman in northern Oklahoma and Kansas. E. C. Sidwell, Shawnee, Oklahoma, will work as salesman through the Seminole field. Mr. Sidwell was formerly with the Schaeffer Oil Company. Ernest Megenty, Midland, Texas, will work as a salesman through West Texas. Mr. Megenty was formerly manager of the National Supply Company at Okmulgee, Oklahoma.

In addition to wire rope sales, Wickwire Spencer Sales Corporation will also sell B. F. Goodrich mechanical goods such as belting, rotary hose, balata valves and grip tight casing guards. The company will also carry in stock for distribution bull ropes and cat lines of the Philadelphia Cordage Company.

Wickwire Sales Corporation will have at least 18 stock locations through Kansas, Oklahoma and Texas. This will enable the new company to render prompt service for the entire Mid-Continent field. E. L. Stevens is the general manager of Wickwire Spencer Sales Corporation and will make headquarters in New York.

P. N. Guthrie, Jr., has been appointed vice president in charge of sales by the Reading Iron Company, and the company has moved its general sales offices from Reading, Pennsylvania, to 30 Church Street, New York. H. F. Mattern will continue as general sales manager. Mr. Guthrie was formerly New York representative of the South Chester Tube Company.

W. D. Emery who has been Southwestern manager for the Foxboro Company with offices in Tulsa has resigned and has become associated with B. V. Emery and Company, also in Tulsa, manufacturers' representatives.

Bakersfield, Calif.—The Oilfields Engineering Service has moved its central office from Taft to this city, the new offices to be located in the Haberfeld Building. This service was organized in 1924 by Lew Suverkrop and has expanded to include petroleum engineering problems in practically all fields of the state.

Los Angeles.—Merger of The McCarty Company and the Robert R. Berry Company, leading advertising agencies for manufacturers in the petroleum and oil industries, has been announced by Terrell T. McCarty, head of the former organization and president and general manager of The McCarty Company, as the new firm will continue to be known.

Mr. Berry becomes executive vice president of The McCarty Company. The accounts and business of his concern are amalgamated into the new firm.

The enlarged organization will begin functioning as such on January 2, occupying newly remodeled offices in the Transportation building.

The service of the enlarged company will comprise every advertising detail, from the planning of a campaign to the supervision of production minutiae. Actual field surveys, writing of sales literature and allied services are included in the McCarty facilities.

Other principals of the new company include Russell P. Ostrander, formerly of the Buchen agency, director of the Reo Motor Car Company's advertising and manager of the Novo Engine Company's advertising; Phillip S. Barnes, account executive, Roy J. Horner, production manager, and Jose Rodriguez, publicity director.

Coalinga, Calif.—In order to cope with the anticipated activity in Kettleman Hills, following completion of the valuable oil and gas well by the Milham Exploration Company, a program of expansion has been projected by the Baker Casing Shoe Company.

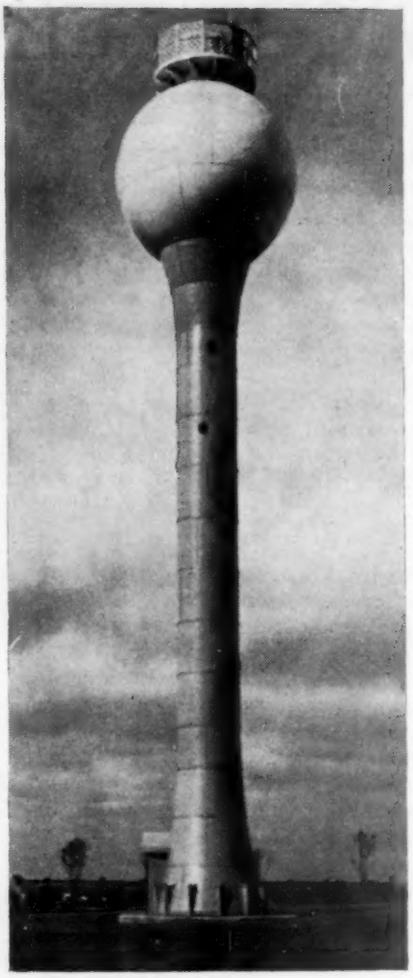
Although the manufacturing interests of R. Carl Baker for the past several years have been more or less concentrated in work done in the Los Angeles factory, the above development has made it necessary to greatly increase floor space in the Coalinga factory and to purchase considerable new machinery.

According to "T." Sutter, salesmanager, the Coalinga factory will carry a complete line of Baker Casing Shoe products and will be equipped to give speedy service on both the equipment brought to the factory for repair and that which it is necessary to repair at the rigs.

Kettleman Hills presents the operators with many unique conditions in drilling, and, according to "T", the 28 years of experience gathered by Mr. Baker during his stay at Coalinga should prove of considerable value to operators in that vicinity.

J. W. Cook, formerly identified with the Craig Oil Tool Company of Long Beach, and now head of the heat treating department of Byron-Jackson, Inc., after the amalgamation of the latter firm with the Craig concern, the Wilson & Willard Manufacturing Company, the Wilson Oil Tools Corporation, the Rotary Disc Bit Company and the U. S. Tools Company, is back in Los Angeles after an extensive trip through the Eastern manufacturing districts. The tour was largely for the purpose of studying the methods in use at the metallurgical department of the largest Eastern factories, and to review for his firm the National Metals Exposition. Shortly after his return, Byron-Jackson, Inc., installed in its new heat treating laboratory five large electric furnaces, entirely automatic in control and operation and designed to meet the most minute requirements of the metallurgist.

Alco Oil Tool Company, manufacturers of the Alco Core Drill, Kammerdiner Rotary Jar, hard formation Bits, Christmas Trees, Hook-ups Flow Bean, etc., have announced the opening of a Mid-Continent Office at Houston, where it will conduct a general oil tool sales and service on its specialties. The Houston branch will carry a full line of high pressure well fittings and flow nipples in addition to the regular line of Alco specialties. The Houston branch is in charge of C. J. Hillman.



Interesting Tank and Lookout at New Scout Camp

L. H. Wentz, prominent oil operator of Ponca City, Oklahoma, has recently established a 160-acre Boy Scout camp four miles northeast of that city.

The camp will be open the year round but the chief activities will take place during the summer months, when groups of boys from Oklahoma and neighboring states will stay for periods of three weeks each. Construction and management is in charge of a staff headed by Roy W. Williams.

One of the first things the visitor sees as he approaches the camp is the combined water tank and lookout. It is an interesting structure shaped something like a giant scepter. The spherical portion is 21 feet in diameter and holds 30,000 gallons of water, which is used as a general supply for the camp. The tower or cylindrical portion is seven feet in diameter and 75 feet high. It encloses a circular stairway which extends through the tank to a platform or lookout 10 feet 6 inches in diameter. This observation point, which is 94 feet above ground, is surrounded by a lattice fence and equipped with a telescope and searchlights.

The steel plates used in building this structure range from 5/16-inch to 5/8-inch in thickness. They were fabricated at the Western plant of the Chicago Bridge & Iron Works and erected by one of that company's field crews.

The Edward Valve & Manufacturing Company, East Chicago, Indiana, announce that they are now being represented in Kansas City by the Smiley Equipment Company, 1737 Walnut Street, Kansas City, Missouri.

Excessive Sand

Steelex Balls and Seats have for years been used successfully in wells where floating sand is present—a packaged ball and seat, for sale by all good dealers and supply stores.

Ask for it by name.

The Chas. N. Hough Manufacturing Co.
Franklin, Penna.
Products That Cut Down Your Underground Overhead

For Strength and Uniformity Use

Murray Tool & Supply Co., Tulsa, Oklahoma
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These TONGS
reverse without turning over!

YOU GAIN
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1. The STANCLIFF BREAK-OUT TONGS *reverse without turning over* . . . thus converting a big source of waste time and energy into money.
2. UP-KEEP COSTS PRACTICALLY ELIMINATED as Removable Keys stand all the wear. Cost of tongs upkeep on 9000 feet of drilling of three recent wells was only $2.40.
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SET SHOES-TONGS

SQUEAKS FROM THE BULL WHEEL

"A beautiful farm girl once wrote on an egg:

"'I am 18 years of age, height 5 feet 3 inches, weight 127 pounds, brown eyes and golden hair. I sold this egg for 2 cents. What did you pay for it? Lovingly . . . . and the girl signed her name.

"Three years later she received a postcard that said:

"'I am 64, weight 217, height 5 feet 2, bald, with false teeth, and while playing the part of Romeo last night I received your egg for nothing.'"

"Well, if half the country can stand him I guess I can, too."

"I don't like to talk about myself, but—"

"I ain't a bettin' man but I'll just go you ten."

"When I get good and ready I'm gonna put my money into a *good* machine."

"All the good actors seem to be dead."

"We weren't going an inch over twenty miles an hour."

"What! Another pair of shoes?"

"My boy is the cutest little cuss. This morning he—"

"Ain't this the limit?"

"Gee whiz."

"Ouch!"

"Is Jim a good proofreader?"

"Good! Why, if a period were upside down, that fellow would spot it immediately."

Flapper: Is your new boy friend clever?

Repeat: No, he's the genius type.

"Why do you laugh so loudly at the comic pictures? Are you really amused?"

"No. I'm only trying to get my money's worth."

"Let me see. I have the shirt on with the plain laundry mark. Ditto the collar. I have the suit on with my tailor's name in it, and the bill in my pocket. I have six letters that came in the day's mail. Also my bank book. Then besides, Billy Magoon, who is going to bring his brother, who is going to bring his brother-in-law, who is going to bring his uncle, who knows the superintendent of mails, is to meet me at the post office at one o'clock. So I don't suppose I will have any trouble cashing that dollar-and-a-half money order."

"I really don't know how to express my appreciation," said the cousin.

"Well, you see," answered the lawyer, "since the Phoenicians invented money a man does not have to worry over that question any more."

Do you still make motion pictures out at your house?

No—we had to stop that. Our son Egbert began writing wise-cracking subtitles.

A small boy was sitting moodily on the front porch of his home.

"What makes you so downcast?" a friendly neighbor inquired.

"Well," replied the boy, "if I had it to do over again I wouldn't eat up sister's lipstick—even for spite."

"Does your son Josh ever come back to visit you, since he got in the movies at Hollywood?"

"Every summer," answered Grandma Tuttle, proudly; "every summer of the three years he's been gone."

"And did he bring his wife with him?"

"Each time," she answered. "And they were three as purty girls as you ever laid eyes on."—Life.

The Irate Father: "I can see right through that chorus girl's intrigue, young man."

The Lovesick Son: "I know dad, but they all dress that way nowadays."

Dinner, unfortunately, was a little late, and a guest asked the hostess whether she would be kind enough to play something.

Seating herself at the baby grand, she executed an admirable excerpt from Wagner. She finished, but there was still a few more minutes to wait, and in the rather pained silence she turned to a deaf old gentleman on her right and asked:

"Would you like a sonata before dinner?"

Her guest gave a start of surprise and pleasure.

"Thank you," he replied. "I had a couple on the way here, but I think I could manage another."

Gold Digger—Men are like tooth paste tubes.

Another—How's that?

The First—You've got to give them a squeeze before you can get anything out of them.

"What is your brother in college?"

"A half-back."

"I mean in studies."

"Oh, in studies he's away back."

Hubby didn't show much interest in the newly-arrived baby and the young wife was disturbed. She was overjoyed one night to discover him standing over the baby's cot.

"A penny for your thoughts," she said, tenderly.

Startled, he blurted out: "For the life of me I can't see how anybody can make a cot like that for $4.50."

"What did the boss say when you told him it was triplets?"

"He promoted me to be head of my department."

"What department are you in?"

"Production."—Skelly News.

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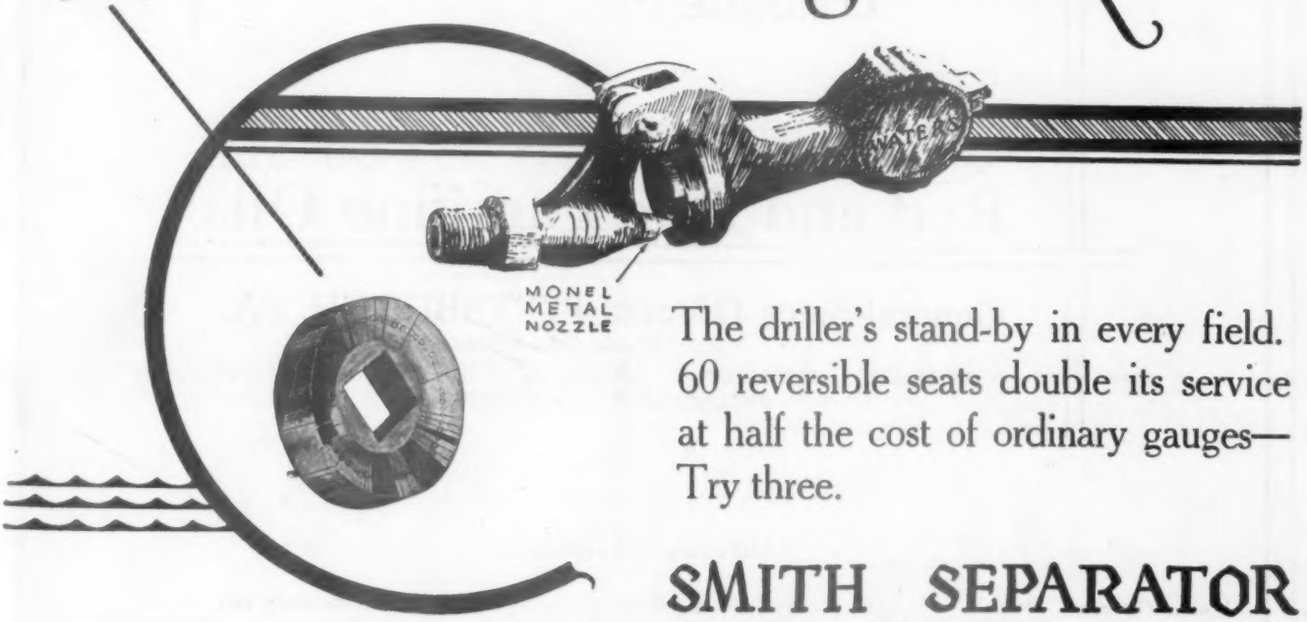

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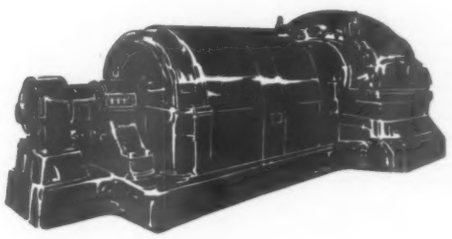

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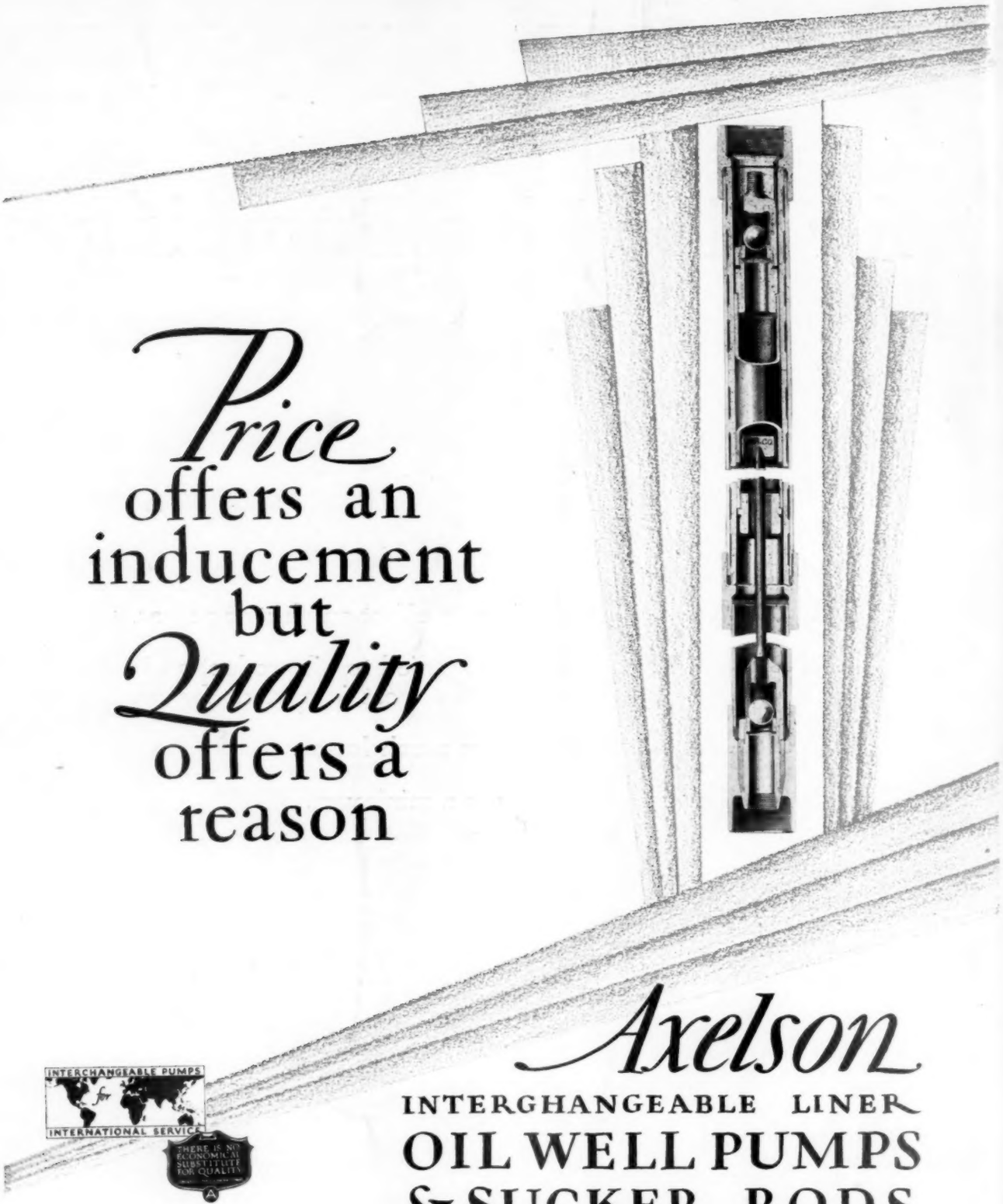

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